

ARCHITECTURE

THE PROFESSIONAL ARCHITECTURAL MONTHLY

VOL. XXXIX

JUNE, 1919

No. 6

Architecture and the Greenhouse

By Harold A. Caparn

LIKE everything else, the modern greenhouse is a product of evolution. It began in the seventeenth century under the form of glazed frames set in front of a wall on which fruit trees were trained to keep the sun's light and heat within. Also, later, to conserve the heat of a flue within the wall. Then it became a room with windows for the storage of plants in winter like the orangeries at Versailles and elsewhere. Gradually the windows grew larger, but even up to the beginning of the nineteenth century a roof was considered necessary, as it was believed that glass overhead would allow the artificial heat within to escape. As soon as it was discovered that the roof could be glazed as well as the sides without undue loss of heat, the modern greenhouse came into being, the supports diminished to the minimum required to support the glass and, as might be expected, the latest thing in glass houses is a steel frame with the lateral supports almost suppressed, and with even bent panes of glass replacing the old-fashioned eaves. Thus the greenhouse has continually travelled further from the architecture from which it first arose.

Greenhouses, as seen by the architect, may be divided into two general classes: the conservatory and the others. The conservatory, whether a part of the house or not, is a place for the board and lodging of exotic plants too sensitive to endure the rigors of our climate. These plants are kept in the conservatory during their period of growth of foliage or flower, and when they fade are replaced by others, so that a conservatory is supplied with relays of plants either by the florist, or from a greenhouse on the property.

The greenhouse is a utilitarian contrivance for the raising of plants to be used elsewhere. Its

first use is usually the raising of early vegetables. Next comes the growing of decorative plants for the house. Next the raising of specialized crops, perhaps roses, carnations, cyclamens, chrysanthemums, and so on, which require different temperatures and seasons of growth, so that a

single greenhouse of, say, 25 feet by 75 feet is often divided into several compartments in which the different conditions may be obtained.

Ideally, a greenhouse like this is a place in which the daylight of outdoors can all be used, but the temperature controlled. It is not difficult to exclude the light when this is desirable, but it is manifestly impossible to let in more light than the structure will permit; so that anything that impedes the rays of the sun detracts by so much from utility. Thus, all the structural supports, while they make the greenhouse possible, help somewhat to lessen its efficiency. And, as a matter of

fact, when the sun is low in the sky and the shadows longer, and this means in the winter when the sun's light and heat are most needed, the supports do interfere considerably with the passage of light. The perfect greenhouse would be an entire crystal, one solid piece of glass.

A structure like this, though thoroughly practical, yet light, transparent, and glistening, with almost all expression of solidity and massiveness that inheres in even a frame building eliminated, is a violent contrast to the impenetrable walls and roof of a house, and the easiest way to

manage it is to keep it out of the house picture by placing it on a lower level, or so as to be screened by a building or group of trees.

Although many greenhouses are handsome structures with their large curves and vast translucence, yet the greenhouse is a kind



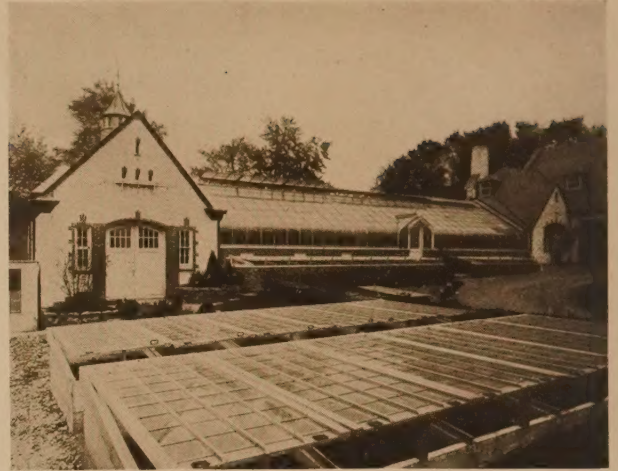
Conservatory, house, Mrs. Claude Meeker, Columbus, Ohio.



A curvilinear conservatory within ten feet of the residence, with workroom in the rear.



T. T. Watson, St. Davids, Pa.



John S. Jenks, Jr., Chestnut Hill, Pa.

of negation of architecture. Ever since stone and brick came into common use, architecture has come to be thought of as solid and impenetrable walls and roof, with relatively small windows. You may have architecture without windows, but not without walls, or their equivalent. But the greenhouse reverses this order of construction. It has no solid walls or roof; it is one huge window. So that it becomes difficult to classify even such a superb thing as the greatest of glass houses, the Crystal Palace at Sydenham, England, among the varied works of the great builders of the world.

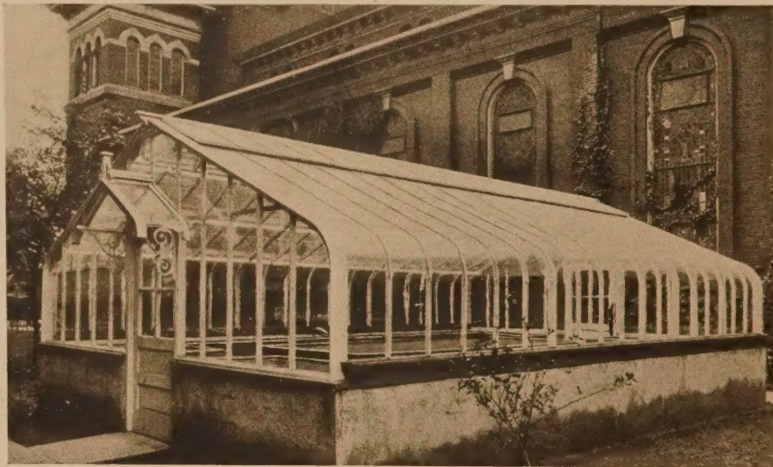
Though the greenhouse goes on increasing in beauty and variety of design, it naturally gets further away from the feeling of the house

instead of nearer to it. It becomes continually lighter, while the house remains about as massive as it always was. When an architect has to design a conservatory as part of

a house, he makes the construction as massive as the needs of the plants will permit. He hates to see a frozen bubble as part of his structure.

Thus, although there are many small conservatories forming fitting and integral parts of houses, it is difficult to make a successful union of a modern greenhouse with a building of masonry. And the surest way to make a fitting union is to keep them far enough apart to prevent their disagreeing.

This does not mean that, a glass house may not be successfully grouped with buildings of other kinds. The



A small conservatory with curved glass eave, erected for St. Peter's Cathedral, Scranton, Pa., providing for constant flower supply.



Side view of conservatory, residence, Capt. De Lamar.



Conservatory and greenhouse attached to residence, W. P. Worth, Coatesville, Pa



Greenhouse and conservatory in relation to residence, Daniel J. Reid, Irvington, N. Y.

conservatories of the Brooklyn Botanic Garden prolonging the line of the Laboratory Building are an example. And instances are not rare of conservatories on the axis of other buildings, but far enough away to avoid grouping from the usual points of view. One can see one from the other, but not both at the same time, so they do not conflict.

Nor does it mean that an attractive and appropriate setting of the most transparent kind of greenhouse cannot be designed. As a greenhouse is a structure for the production of exotic plants and flowers to be used elsewhere, so there is no more fitting place for a cutting garden, that is, a place for the raising of flowers for cutting, than outside of it. And if it is possible to get a background of trees—the really indispensable background for any kind of structure in the country—with a well-designed foreground of flowers, the whole composition may be entirely harmonious and pleasing.

Again, inasmuch as the greenhouse is so often used for the raising of vegetables out of season, its natural place is near the garden where vegetables are raised in season. So that one might say that the ideal site for the greenhouse with the cold-frames and hotbeds would be in close relation to both the cutting and vegetable gardens. Thus we get all these utilitarian

and lends much charm and dignity to a country place.

Such a layout as is suggested is, of course, only possible

on an estate of considerable size, and in such case the greenhouse problem is comparatively easy. As the grounds contract and buildings come closer together, a satisfactory solution becomes more difficult, though the same general principles obtain. And it is inevitable that many attempts have been made to combine

the dwelling-house and the plant-house, though never very successfully, as it seems to the writer.



Missouri Botanic Gardens.



Grouping of buildings and greenhouses in architectural design, C. A. Coffin, Locust Valley, L. I. Howard Greenley, Architect.

Attempts are often made to bring the greenhouse into the realm of architecture by designing that necessary adjunct, the workroom, with much care. Some designers have made attractive little structures of stone or brick, but the effect seems to be rather to separate the workroom from the greenhouse, and the less pretentious frame workroom looks more in character. The reader can form his own judgment from the illustrations.

For the greatest number of uses it is considered best that a greenhouse should run north and south or thereabout, so that the sun may reach both sides alike during the day. Some specialists consider that there is merit in turning it a little to the west so that the early morning sun may reach it more directly; but refinements like this are probably of imaginary value. For roses, which require an exposure to the southern sun, an east and west orientation is best. But in fact, a span-roofed house, that is, one with the roof pitching both ways,



Greenhouse, Johns Hopkins University, Baltimore, Md.

may be successfully run with almost any orientation. But a lean-to, that is, a one-sided greenhouse with a glass roof resting against a wall, must be placed so that it will receive a good share of direct sunlight.

It is not possible to go into the question of orientation deeply here, and any one having unusual conditions to meet is advised to consult a specialist on greenhouse construction.

A word about the interior of the conservatory may be in season. The stereotyped way of setting the plants in rows on benches is quite reasonable from the practical point of view of raising as many plants as possible in a given space; but it is the least effective way of displaying plants of unusual size or character. These may be planted, not in pots or tubs, but in soil on the conservatory floor, and arranged in naturalistic combinations to produce striking effects of tropical landscapes, as is done with so much success at the Missouri Botanic Gardens at St. Louis.



Greenhouse grouped with cottage and garage, Pierre S. Dupont, Mendenhall, Pa.

Can Reims Be Rebuilt?

The age of styles is dead . . . the cathedral-building era is dead. The spirit of architecture has closed her wings, and sleeps. Gone is the enthusiasm that erected Notre Dame, Amiens, Beauvais, Rouen! The sacred fires that breathed life into their art are damped out in a modernism that finds no place (and no money!) for the creation of those marvellous fabrics which the wild ages have left us, and which the engines of war have laid low. Restoration is only practicable and desirable to a certain degree. Can Reims be rebuilt—or should it be? The genius of Robert De Courcy cannot be invoked, nor can Clovis come again to baptism.

From *"The Glory of Gothic Beauvais Cathedral,"* by Captain Robert Cromi, in *The Architectural Review, London.*

Macomber & Whyte Rope Company's New York Branch

The Macomber & Whyte Rope Company, manufacturers of wire rope and wire, at Kenosha, Wisconsin, announce the opening of their New York branch, at 30 Church Street, New York City, telephone Cortlandt 7436, under the management of Mr. E. E. Robirds, who has been successively manager of the Pittsburgh and Chicago offices before the opening of the New York branch.

Mr. Robirds takes charge of a competent staff of wire-rope men in New York City. They also announce the opening of their Birmingham, Alabama, branch, under the direction of James A. Boope, Southern manager, 805 American Trust Building, Birmingham, Alabama.

Prompt service is assured by a complete stock of wire rope, both black and galvanized, in all the sizes, grades, and constructions, as well as galvanized strand, sash cord, clips, thimbles, hooks, sockets, couplings, etc.

About Malleable Iron

A treatise on "Malleable Iron" is issued gratuitously by The American Malleable Castings Association, headquarters, Cleveland, Ohio.

Phenomenal progress has been made in this particular industry during the last few years.

This booklet—a forerunner for a comprehensive volume to be issued later—is filled with valuable data.

It is divided into three parts: Part I, "What Is Malleable Iron?" Part II, "The American Malleable Castings Association." Part III, "The Uses of the Malleable Iron Casting," "Can Heavy Sections of Malleable Iron Be Completely Annealed?" "The Skin of a Malleable Iron Casting," "Malleable Iron Castings Resist Rust."

A copy of the book will be sent to any one addressing the association at Cleveland, Ohio.



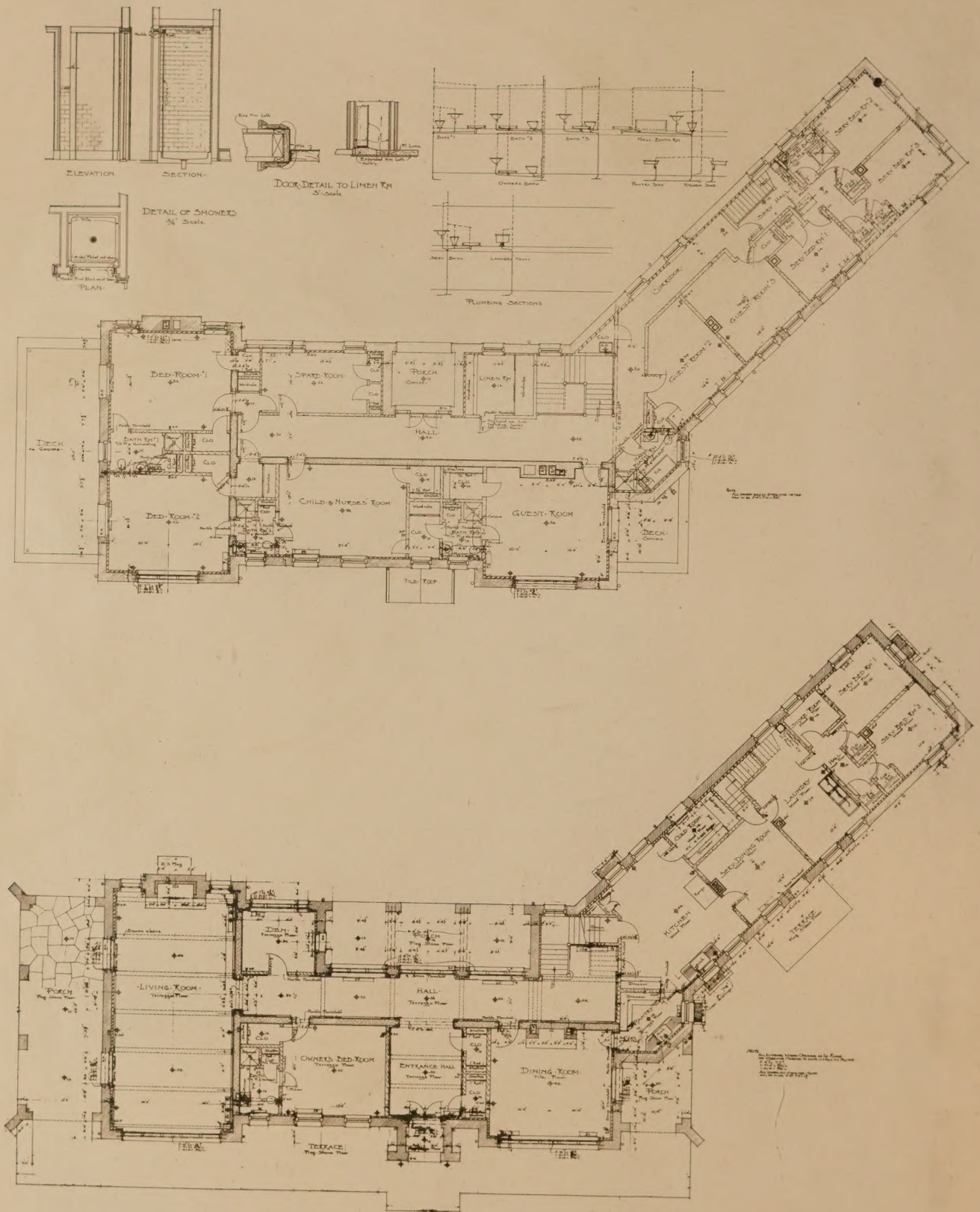
FRONT.



REAR.

RESIDENCE, J. W. JOHNSON, CRYSTAL LAKE, PA.

Edward Langley, Architect.



PLANS, RESIDENCE, J. W. JOHNSON, CRYSTAL LAKE, PA.

Edward Langley, Architect.



LIVING-ROOM.



DINING-ROOM.

RESIDENCE, J. W. JOHNSON, CRYSTAL LAKE, PA.

Edward Langley, Architect.

Floor and Wall Tile, Their Mission and Application

CLAY tile have been known from the earliest historical periods and have been made and applied in every country of the world.

The qualifications required of clay tile are: first, durability; second, artistic quality; third, aseptic or sanitary properties; fourth, atmospheric resistance (frost and weather-proof). To these qualifications has lately been added an ever-increasing demand for "non-slip surfaces."

We will try to analyze these various qualifications in the sequence mentioned.

Durability, in respect to physical or mechanical resistance of a clay tile, is unquestioned, providing the body composing the tile is of a strong and tough character burned to at least partial vitrification. A tile should be hard enough to resist the scratching with a hardened steel point and it should give a decided ring when tapped with a hammer. A tile burned to entire vitrification is the most durable tile as far as abrasion is concerned, but a tile having from one to two per cent of water absorption is practically as hard as the vitreous tile, and instead of the well-known brittleness



Tunisian tile panel in lobby, Hotel Commodore, New York.

of vitreous tile, which is apt to cause a break or spalling on the edges and corners, it is much tougher and will give the best satisfaction. The preparation of the material is also to be considered in this paragraph. Tile made of a plastic material will always attain a closer and more cohesive structure than tile prepared of dust, and for certain purposes, especially where violent concussion of the surface of the floor or where it is subjected to frost or moisture, plastic body is preferable to the dust-pressed product. Tile which do not answer to the

above specifications should not be used in floors, as an under-burned tile will rapidly wear out. Care should be taken that all tile are of about the same hardness or density, so that the wearing of a floor should not produce a corrugated or uneven surface.

The artistic phase of tilework depends principally upon its proper application. Where tile of more or less ruggedness or more refined finish should be used is a matter for the architect to decide. As tile has been made in every period and applied to every architectural style, it is not difficult to select the proper texture to conform and harmonize with the buildings or spaces to be tiled. Buildings of a mediæval style would naturally call for a tile of a rugged character, etc. It may be said that tile-makers have lately endeavored to work in the direction of a more artistic material, as they realize that the mechanical dust-pressed tile, while admirable in a strictly mechanical sense, lack the decorative qualities of the plastic hand-made article.

It has been found that the former anxiety to produce tile of a perfectly even shape and color was a misplaced effort, as tile showing the actions of the fire present a very much more artistic appearance. It may also be said that natural-colored clays are coming more and more in the foreground, so that the kaleidoscopic efforts of the former so-called "common encaustic tile" has been discarded. If interesting features are desirable, decorative inserts, panels, and selected textures in borders or fields of the tile are established with excellent success.

The texture of a floor or a wall depends mostly upon the units of tile applied, and this again is an artistic problem which must be solved by the architect. As a rule, the design of the floor follows the constructive layout of the building, so that columns and pilasters are usually connected with borders and certain parts are treated with separate panels, etc. In this manner small units can be applied with very fine effect, as the large fields, borders, and panels will conform with the proportions of the building. The use of large tile for a large floor is now considered a rather ques-

tionable conception. We know that a huge tower or wall is built of the small units of brick without losing its massive appearance, and so a very large floor or an extensive wall may be laid in small tile units for the same reason.

All clay tile are aseptic or sanitary if they are burned to sufficient hardness, whether they are glazed or unglazed. A hard-burned tile



Tile radiator grille.



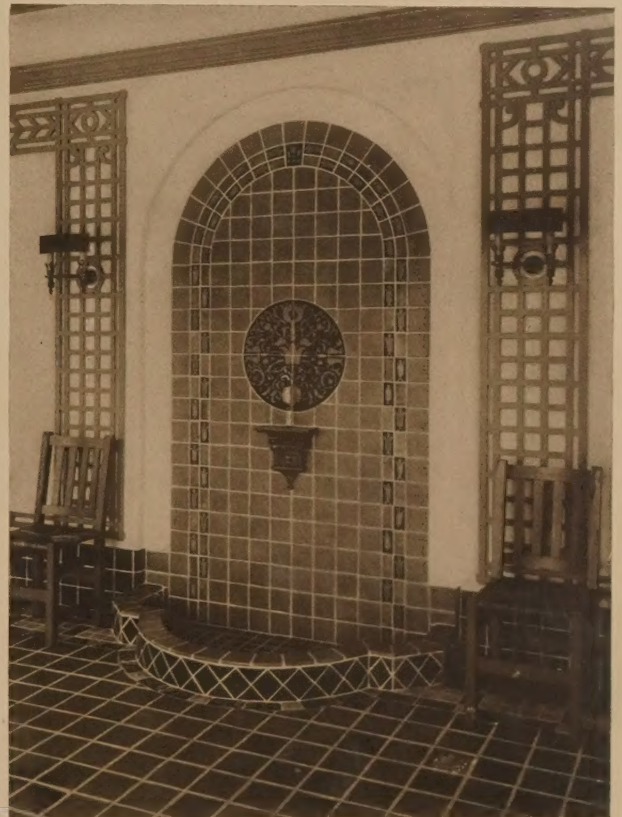
FLOOR TILE IN ST. BARTHOLOMEW'S CHURCH, NEW YORK.
Bertram G. Goodhue, Architect.



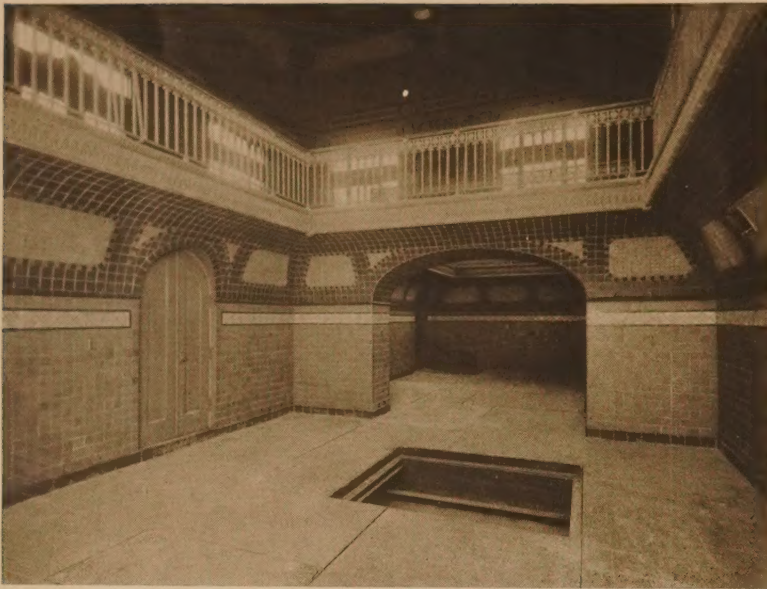
FLOOR IN CLEVELAND ART GALLERY.
Touraine Quarry field in Travertine color. The ornamental part in Tuscan glazes and Tuscan inlay decoration. Arthur Loomis Harmon, Architect.



FLOOR DESIGN, IN TUNISIAN TILE.
EVERGLADES ROD AND GUN CLUB, PALM BEACH, FLA.



TILE FOUNTAIN.



Faience walls, Sewage Pumping-Station, Brooklyn. A. L. Martin, Architect.

is so dense that no microbes or lichens can grow or multiply on its surface, but for strictly sanitary rooms, such as operating-rooms in hospitals, bathrooms, etc., the walls are usually veneered with glazed tile. This presents a positive aseptic surface which can be easily cleaned. For bathrooms the white wall tile has been broadly adopted, but lately a desire for a warmer and more comfortable treatment of the private bath has become manifest. The glaring white cold bathroom does not appeal to a more refined taste, and in its place green, brown, and yellowish combinations of color have been used for floors and walls with very good artistic success. The color does not interfere with the aseptic properties or the ease of cleaning.

It is of great importance that tile are set securely on the wall, so that no hollow spaces occur between the tile and wall, and it should be of greatest importance that all joints are well filled with strong cement mortar. It may be said in this connection that an ample joint is really more aseptic than a very close joint, as an ample joint can be more securely grouted than too close a joint, as the grouting in too

tight a joint will sometimes bridge over an empty space and afterward fall off, allowing an open joint where dust and microbes can accumulate. If this joint should connect with the hollow space back of the tile the danger is obvious, especially as such spaces cannot be cleaned.

A piece of tin or even a piece of glazed paper is aseptic in itself, but in applying it to the wall it is impossible to effect a perfect cohesion and while in such a case the surface may be absolutely sanitary, the wall itself is very far from being so.

Atmospheric conditions in our country are such that the greatest care must be taken in selecting materials for exterior use. We have in many of the cities an atmosphere filled with sulphuric acid on account of the coal smoke. This acid is responsible for the disintegration of marbles, so that colored marbles soon lose their freshness of appearance. Tile may be considered as belonging to two classes in this respect: for decorative use, as on the exterior of walls; and for more practical use, as floors on exposed porches.

For decorative purposes color is essential, and the colored faience tile, which can be furnished in any desirable shape and reasonable size, form the most extensive medium of exterior decoration, providing that they will not disintegrate by frost. Other influences cannot harm the tile or change the colors. There is only the frost, which will

positively disintegrate the tile by spalling off the glaze unless every precaution is taken to avoid it.

It is extremely hazardous to use a so-called "dust-pressed mechanical tile" for this purpose, as even very hard and dense dust-pressed tile have spalled. The hard-burned tile made of a plastic material has withstood frost under the most trying conditions, and it is the only glazed material which



Italian style, executed in faience. Field composed of odd sizes. Ornamental border of Tuscan inlay design. The panel decorations are in the style of the Opus Sectile.

can be recommended with perfect assurance.

The possibilities of polychrome gives tile a precedence over any other material that is not wholly an applied decoration. Where the architect is seeking to combine decorative quality with permanent construction, he finds in tile an imperishable structural material capable of a wide range of color and adaptable to original design or to copies of old work.

Editorial and Other Comment

Still Room for the Word Art

NOTHING like hard times to reveal the defects of any business, or to set men thinking along new and constructive ways. In times of peace and easy going we are apt to let well enough alone and to be content with old methods and old traditions. Many men have had to wait for the middle years to find themselves, and one of the by-products of the war was the searching out of men too old to fight and to put them in the way of new enterprise and new opportunities. During the war we were hearing many of the troubles of the architects blamed on so-called obsolete methods, and the Institute came in for its full share of criticism. "Old ways must go. Times have changed. Architecture has ceased to be thought of as an art. It is a business, and the professional man who clings to the teachings of the past must put aside all such stuff, put beauty from him as he would the devil behind him, and build as a builder, with science as his boss and the engineer always as his side partner." There was a lot of good sense in some of this talk, and out of it, no doubt, has come better co-ordination between the practical man and the so-called dreamer of mere dreams.

There are few architects worthy of the name, however, who would be willing to admit that art has no place in their products. Do we not all of us find that Mr. Gilbert's great Woolworth Building is a thing of beauty as well as a commercial success as a mere building? There is no reason for ugliness even in commercial art, and we are slowly waking up to this fact, not only in architecture, but in our industrial and applied arts.

Educating the Public

MR. MAGONIGLE'S recently well-taken point is worth keeping in mind about the education of the public. With a reverse English on the proposition, he rather put it up to the architect.

We like his Suggestion No. 7: "The study of design as such should precede the selection of a career as architect, painter, sculptor, or designer in the crafts, that up to a certain point the training of the architect, the painter, and the sculptor should be identical would seem to confirm our view that the architect may still be an artist and find a place for himself in our very modern world.

And Conviction No. 2: "That if architects, architecture, and the practice of architecture are in the mess they are alleged to be, it is because architects are superficial, selfish, half-baked, and far less than half-educated."

There has seemed no sufficient reason for damning the profession in general because here and there some one has taken his "half-baked" art too seriously, and omitted to mix with it a practical knowledge of some of the material things upon which business success in any profession is founded.

The dear public likes to follow a competent leader, and the more good architecture is put before it the wider will be its appreciation. Show him what's what. There is no finer field for this campaign of education than in the present overwhelming demand for good domestic architecture, the building of homes. Thousands are going to be built. May we be saved from the "old vintage" things that

clutter up our suburbs all over the country. Great credit is due the architects who have designed some of our industrial war towns. They have taken them out of the old-time rows of unseemly and unwholesome barracks and given us houses with individuality and claims to beauty and family privacy.

Wait Awhile

MR. CASS GILBERT in his recent address before the American Federation of Arts at the Metropolitan Museum of Art, New York, urged strongly the need of waiting before plunging ahead with war memorials involving the expenditure of large sums of money. The mood of the moment, born of however worthy sentiment, may, as the years go, become only another shrine and embodiment of wholly bad taste as well as bad art. Let us wait awhile. By waiting we shall better appreciate the great deeds of our army, the great sacrifices of those who stayed at home, have time to sift from the mass of proposed war memorials those that shall be worthy of the cause our soldiers fought and died for.

The Professional Idea

AT the fifty-second annual convention of the Institute at Nashville, the memorable address of the occasion, according to the *Journal of the American Institute of Architects*, was that by Mr. John Bell Keeble. "It swept like a great, harmonious piece of orchestration over the whole scale of the professional relation, a scale built up through the silent, patient, and mostly obscure devotion of men who have worked in all callings and through all ages, true servants and faithful disciples of the professional idea."

"If professionalism is to endure," said the president of the Institute, "I believe its disciples must awake to the menaces of the all-absorbing commercial tidal wave that seems to be upon us."

We find pleasure in quoting this extract from Mr. Keeble's address:

"Now, there are certain definite things that we know about the professional life by which we judge it. And in discussing that we must remember that professional men ought, not only in their own lives, to demonstrate these fundamental principles that are determinative of all classification of professions, but to stimulate in others the development of those qualities. And one of the first things is this—that it is generally regarded as necessary for a professional man to have more or less general culture. A man can build a railroad without culture, in the sense of a financier; he can finance a railroad or he can operate a railroad without culture; a man can establish a great bank or a great financial system without culture. But it is a very difficult thing for a man to be a real architect, or a real lawyer, or a real physician, or a minister of religion without general culture, either acquired in his youth or acquired in his maturity, alone, and under greater obstacles.

"I am not one of those men who believe that culture is only obtained in a college. In fact, the modern college does not turn out as many cultured men as I would like to see it turn out. It has gone most too far in the showy and in that physical indulgence of youth in athletics and pleasures which attract the attention of the commonplace in the world.

This, perhaps, stimulates gifts but does not, in my judgment, sufficiently stimulate culture. We take pride in our callings, in that we recognize that you and I and those who come after us in our professions can never reach the real standard that we sought without giving a great deal of attention to the acquisition of general culture."

With such ideals there seems to be little danger of the profession of architecture falling from its high estate, from losing its place in the sun, from becoming merely "a job." As an art it will be always, as it has been, the expression of individual taste and knowledge, of personal culture, let us say; and by culture we do not mean to express a meticulous and affected "niceness," but the full and trained mind where judgments are founded on true perception and knowledge.

Some Valuable Facts

WE call attention to the article in this number by Mr. Richard P. Wallis, and particularly to the valuable accompanying charts and diagrams that give the facts regarding the building situation. He takes the question of building out of any mere theoretical discussion, and bases it on statistics that seem incontrovertible. We are pleased to say that we hear most encouraging reports from various sections of the country, and the period of watchful waiting seems to have about passed. The need of homes, of places for people to live, is becoming desperately insistent. A beginning has been made in the right direction, and we firmly believe that progress will continue with constantly widening expansion.

Tradition Will Always Be Respected in Good Architecture

Although to-day both practising architects and the critics who interpret the views of the public are engaged in conference anent the right policy for the development of architecture as a fine art, consensus of opinion favors a reverent attitude toward the achievements of the past. This in itself is a victory for those who believe in the continuance of tradition, and it should be borne in mind that the term "traditional architecture" is no longer fettered by insular prejudices. To-day such irrelevant questions as place of origin, period, style, or other purely local characteristics, are not allowed to influence the quest for correct form. The whole musical scale of architecture belonging to the world's history offers itself for comprehensive study; we can measure the qualities of one set of buildings against another, we can choose the finest models to add to our repertoire, and quote examples and authorities in support of our theories. Our power of conception is of necessity limited to a reconstruction of the various forms we have had experience of.

The wheels of architecture move slowly, in spite of abortive attempts to accelerate speed. There is only one definite course by which architecture can be advanced, namely, a tireless study of composition. Sir Joshua Reynolds in his "Discourses" dwells insistently on this, in so far as it relates to the art of painting, and his theories are equally applicable to architecture. The study of composition was the one absorbing occupation of the artists of the Renaissance, who, working on material offered by the ruins of Roman splendor, achieved fresh groupings, more subtle detail, and a literal return to the classic spirit of the senses and understanding. From an introspective study of history and a logical application of the best models such research affords, there must inevitably result a continuance of tradition, and, moreover, an extension that is vital. Conception and composition are practically synonymous terms; con-

struction is a factor complementing the two former, for a building of true architectural pretensions is always conceived in embryonic mass long before the problems of construction are entered upon.

It is now accepted that the invention of an entirely new mode in architecture, by any one individual, is an impossibility; for building expression is the language of many, and to be understood it must conform to rules generally acknowledged. In support of this contention we put forward the achievements of those who have paid homage to tradition, and contrast them with the productions of those who have mutinied against discipline. The mutineers, forced by the urgency of the position to declare their policy, submit casual propositions for a new order of things, which, on investigation, invariably prove to be a travesty of the rules they wished to avoid. There are others, and they are the more dangerous, because their zeal for speedy recognition leads them to ignore the conventions.

Architecture is a fascinating subject to write about; a facile pen will cover reams of paper; but the practice of architecture is the most secret of the arts; one must never be content with a first impression or obscure one's sense of fitness by attractive sketching.

From The Architectural Review, London.

Prizes in the American Housing Competition

The American Housing Competition inaugurated by the *Journal of the American Institute of Architects* and the *Ladies' Home Journal* has been judged by the jury, and two second prizes of five hundred dollars each were awarded to:

MILO HASTINGS, New York City,

ROBERT ANDERSON POPE, New York City.

In making this award of two second prizes, the jury was governed by the fact that, while the theses submitted, in both cases, offer a thorough analysis of the causes and cure for the housing problem as it now exists in the United States, the physical plans submitted did not fully provide for the application of the principles set forth in the theses. It was therefore decided to award two second prizes, since the jury was unwilling to make a discrimination between the theses of Mr. Hastings and Mr. Pope. Of the other twenty-nine submissions, those of merit contained analyses and solutions which largely coincided in principle with those to which the two second prizes were awarded, but failed in quality of presentation.

The New York Society of Architects

At the last annual convention, held recently, James Riely Gordon was again unanimously re-elected president, for the fourth consecutive term; Louis E. Jallade, of New York, was elected vice-president; Edward W. Loth, of Albany, second vice-president; Henry Holder, of Brooklyn, treasurer; Frederick C. Zobel, of New York, secretary; and Walter H. Volkenning, of Brooklyn, financial secretary. Directors for three years, James Riely Gordon, Henry Holder, John Bergeson, Hugh Tallant, and Louis E. Jallade, and for one year, Nicholas Serracino and Frederick C. Zobel.

There were many interesting discussions. The consensus of opinion was that the present prices of labor and material will remain, and that this is the most advantageous time to build, in advance of the great amount of building which will undoubtedly be inaugurated before fall. Many important steps are in contemplation this year for the future welfare of the architectural profession. The society is heartily co-operating with other architectural societies, and with real estate and building organizations allied with the profession.



THE CHANCEL, HUCUENCT MEMORIAL CHURCH, PELHAM MANOR, N. Y.

Francis A. Nelson, Architect.

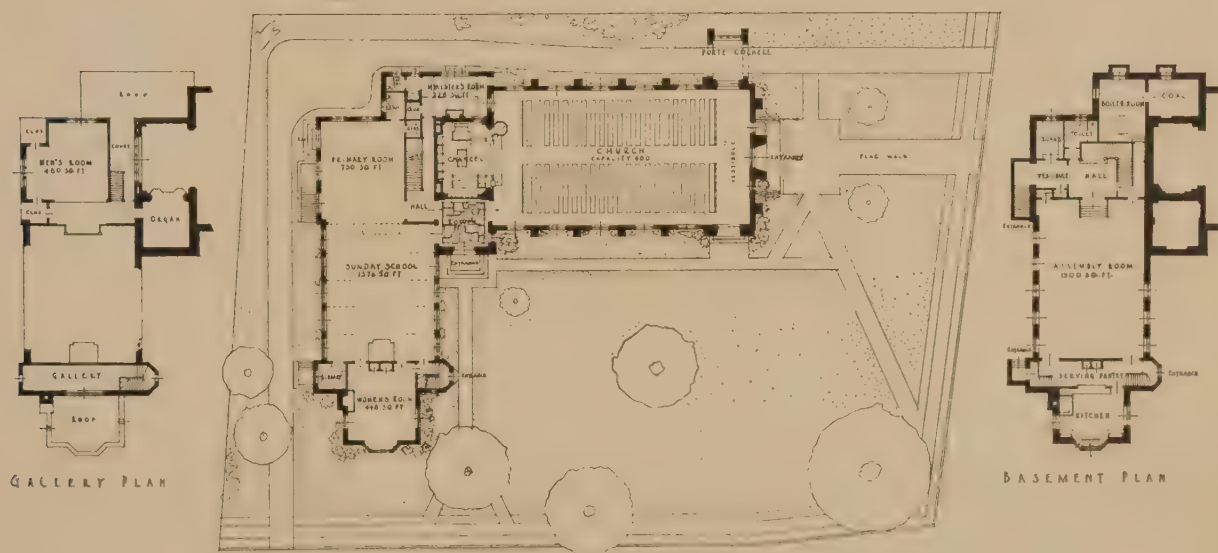




THE HUGUENOT MEMORIAL CHURCH, PELHAM MANOR, N. Y.



AUDITORIUM.



FLOOR PLAN.

Francis A. Nelson, Architect.
The Latimers, Landscape Architects.

THE HUGUENOT MEMORIAL CHURCH, PELHAM MANOR, N. Y.



THE WOMEN'S CITY CLUB, 22 PARK AVENUE, NEW YORK.

The Women's City Club at No. 22 Park Avenue is typical of the late Stanford White's most inspired work. One of a unit of three houses designed by Mr. White for his sister, Mrs. Prescott Hall Butler. It is illustrative somewhat of the monumental type of architecture Colonial in detail. Exteriorly it is a good example of group building designed to give architectural unity to a certain neighborhood. Built of Milwaukee brick, with the round bay common to so many Beacon Street houses in Boston, it expresses both dignity and domestic comfort, and the wrought iron balconies from the first story windows and over the entrance-porch lends an enlivening spirit to the facade.

McKim, Mead & White, Architects.



MANTEL IN THE DINING-ROOM, WOMEN'S CITY CLUB, 22 PARK AVENUE, NEW YORK.

McKim, Mead & White, Architects.

The original dining-room on the first floor also used for the same purpose by the club is unusual in many respects. It is nearly circular and the walls are covered with dark brown leather applied in panels and studded with brass nails. This was Mr. White's own idea and with the handsome mantel of Istrian stone and Sienna marble imported from Italy forms a wonderfully rich and effective apartment. The lighting fixtures here as elsewhere were specially designed for their respective places.



The large front room on the second floor with the bay is still used as a drawing-room and retains much of the handsome furnishing belonging to the house, notably some rare old paintings, one by Fortuny. The combination of Italian Renaissance and Colonial is carried out with fine effect here, Corinthian pillars and pilasters in groups lending a decorative aspect that goes to make the room one of the most charming ever designed by Mr. White.



ENTRANCE-HALL.

McKim, Mead & White, Architects.

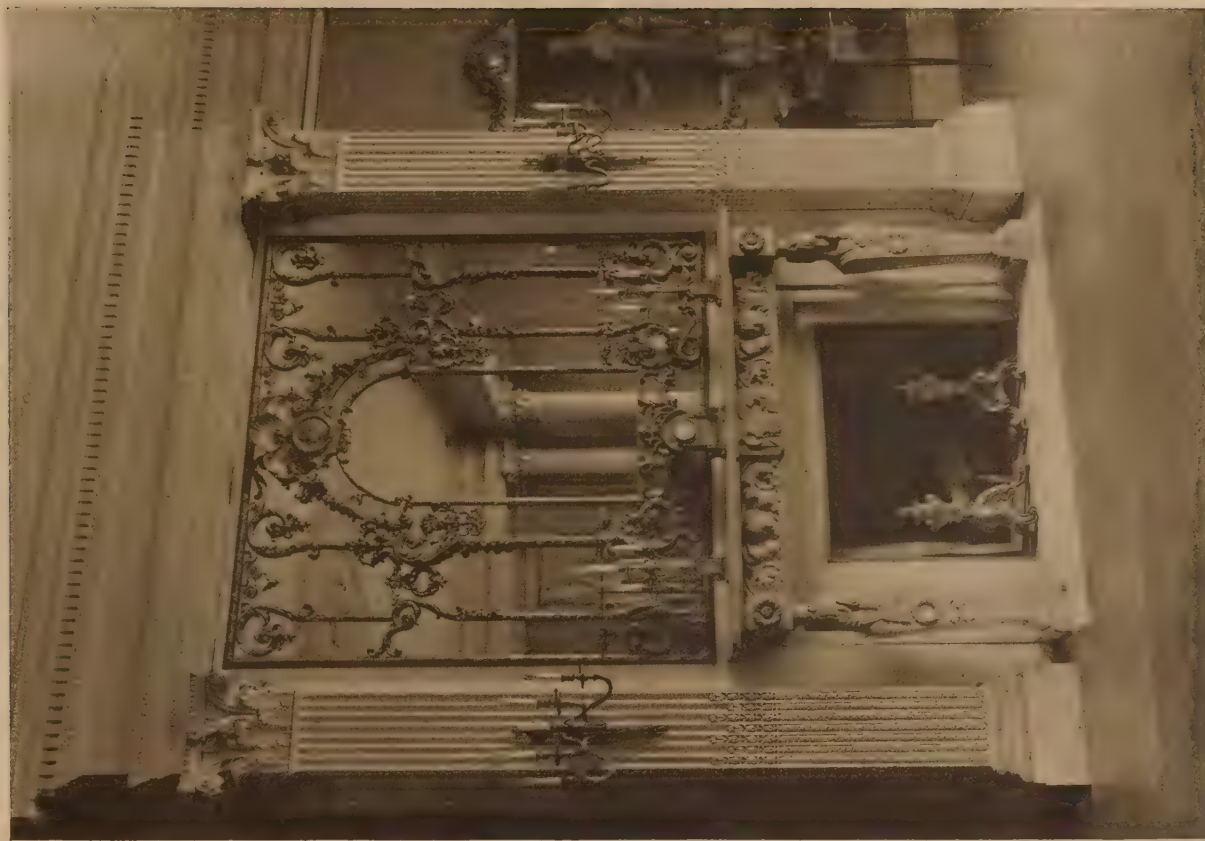
THE WOMEN'S CITY CLUB, 22 PARK AVENUE, NEW YORK.

The entrance-hall reached from the street level is treated architecturally. The mantel, imported from Rome, is of Italian Renaissance marble. The pillars support the cornice, separating it from the stairway well and the tiled floor. Italian seats flanking the fireplace produce an atmosphere of palatial grandeur which is emphasized by fine modelling of the white panelled walls in Georgian motifs.



THE WOMEN'S CITY CLUB, 22 PARK AVENUE, NEW YORK.

One of the most beautiful features of the club is the staircase which carries out the monumental aspect of the type in the broad treads and easy rise as it is carried by two turns to the upper floor. The hand-carved balusters, three designs in repeat, are exquisite and, associated with the Renaissance columns upholding the cornice and entablature on the second and third floors, form a notable detail.



McKim, Mead & White, Architects.

A detail of the mantel and over-mantel in the drawing room showing the treatment. Corinthian pilasters upholding a cornice and entablature frame the fireplace and create a decorative effect that give the key to the architectural scheme carried out in this perfectly proportioned and charmingly simple apartment.

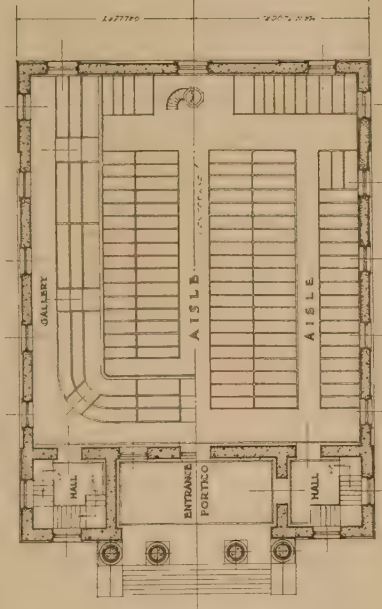


THE ADMINISTRATION BUILDING FISK RITBERR CO. CHICOPEE FALLS, MASS.

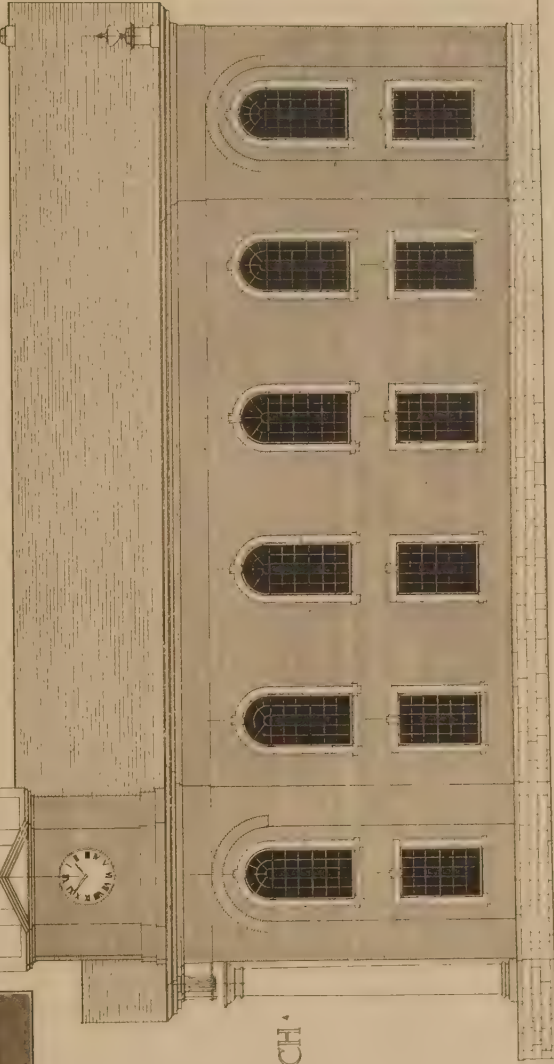
Geo. B. Allen, Architect.



• FIRST REFORMED CHVRCH •
ALBANY · NY ·
Ph Hooker · Architect

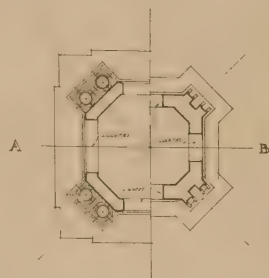


• PLAN •
• MAIN FLOOR AND GALLERY •

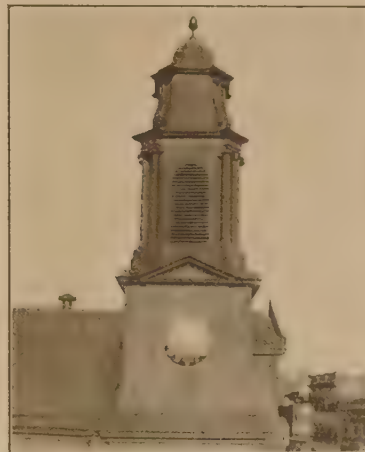


• SIDE ELEVATION •

*Restored by
J. H. Spaulding '10*



PLAN OF TOWER
AT A & B

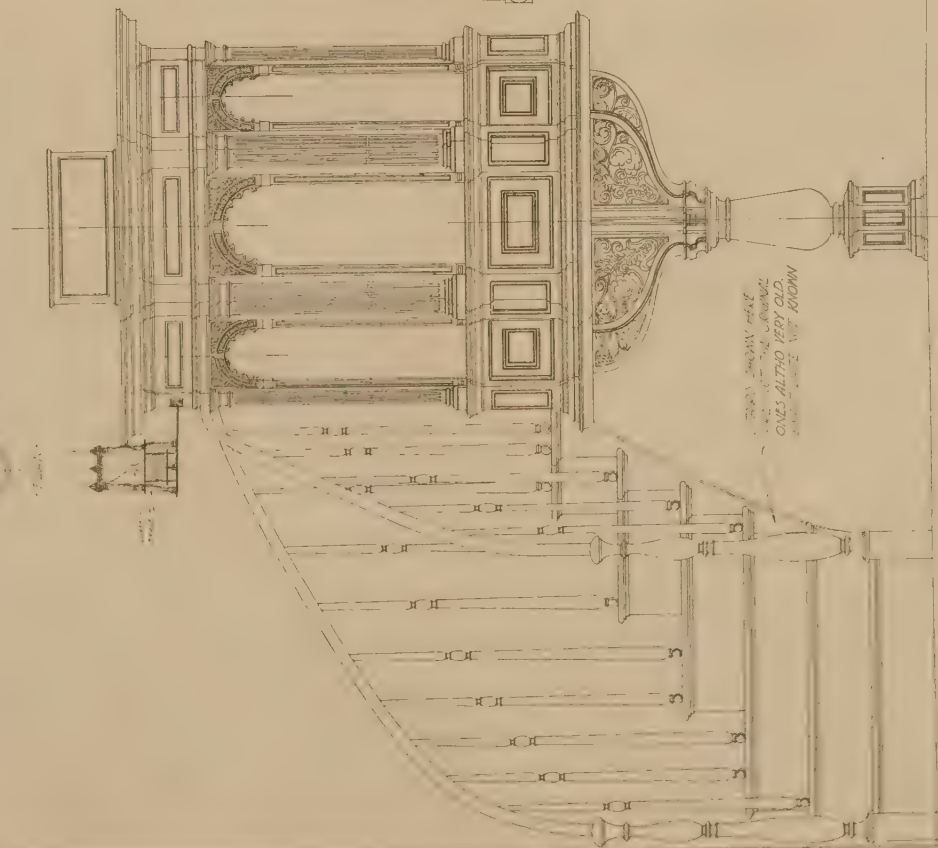


PEARL ST. ELEVATION

FIRST REFORMED CHURCH
(NORTH DUTCH)
ALBANY N.Y.

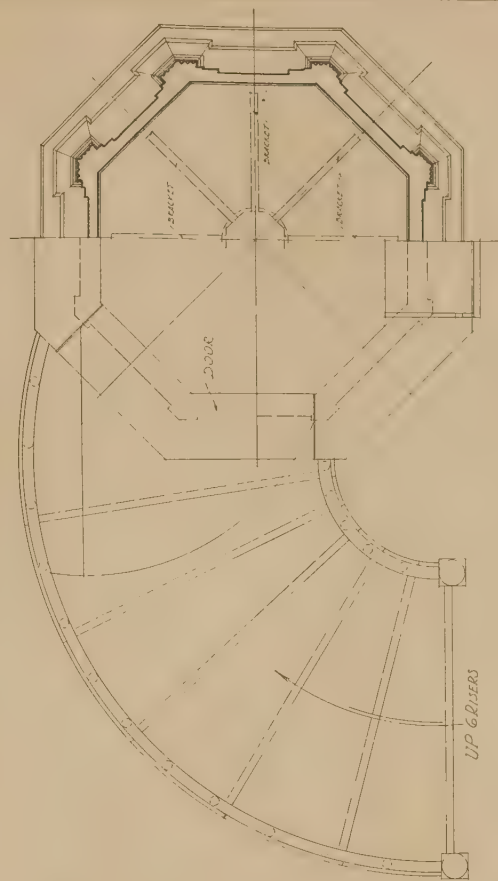
Th. Hooker - Architect
1797

Restored by
J. J. Hendrickson - 1910



THIS PULPIT WAS BUILT IN HOLLAND & SENT OVER TO THIS COUNTRY IN 1657. IT IS STILL IN USE IN THE THIRD CHURCH BUILT BY THIS CONGREGATION. ARCHITECT UNKNOWN

ELEVATION



PLAN

DETAIL OF PULPIT — FIRST REFORMED CHURCH — ALBANY, N.Y.

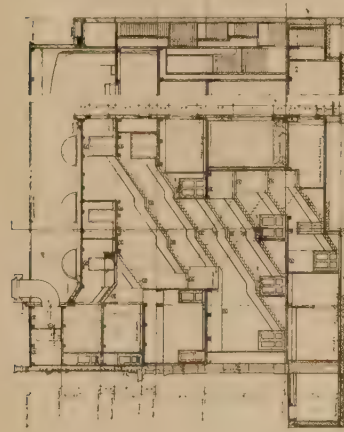
THIS PULPIT WAS BUILT IN HOLLAND & SENT OVER TO THIS COUNTRY IN 1657. IT IS STILL IN USE IN THE THIRD CHURCH BUILT BY THIS CONGREGATION. ARCHITECT UNKNOWN

Measured & Drawn
By J. L. Spurr 18

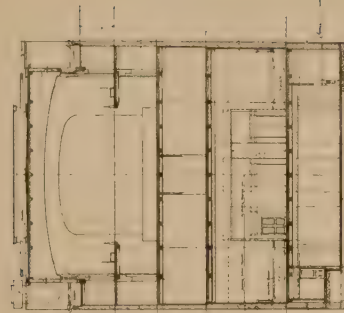


EAST 85TH STREET ADDITION.

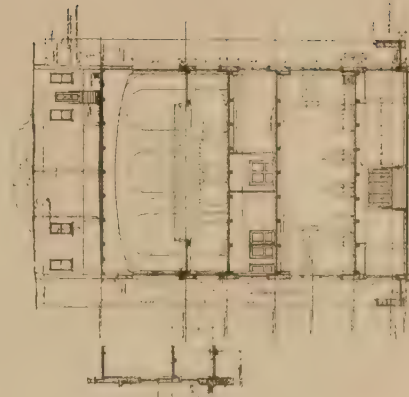
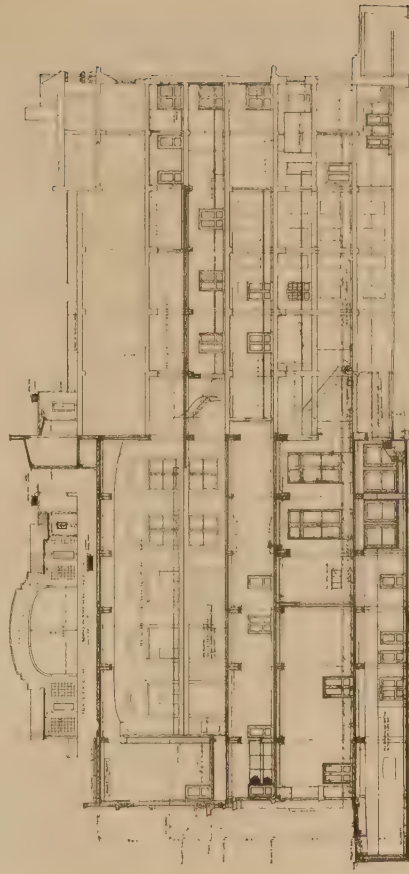
MUSICAL MUTUAL PROTECTIVE UNION BUILDING, EAST 85TH AND EAST 86TH STREETS, NEW YORK.



LONGITUDINAL SECTION THROUGH THE EAST 85TH STREET ADDITION.



TRANSVERSE SECTION THROUGH THE EAST 85TH STREET ADDITION.



ELEVATIONS AND SECTIONS.

Trowbridge & Livingston, Architects.



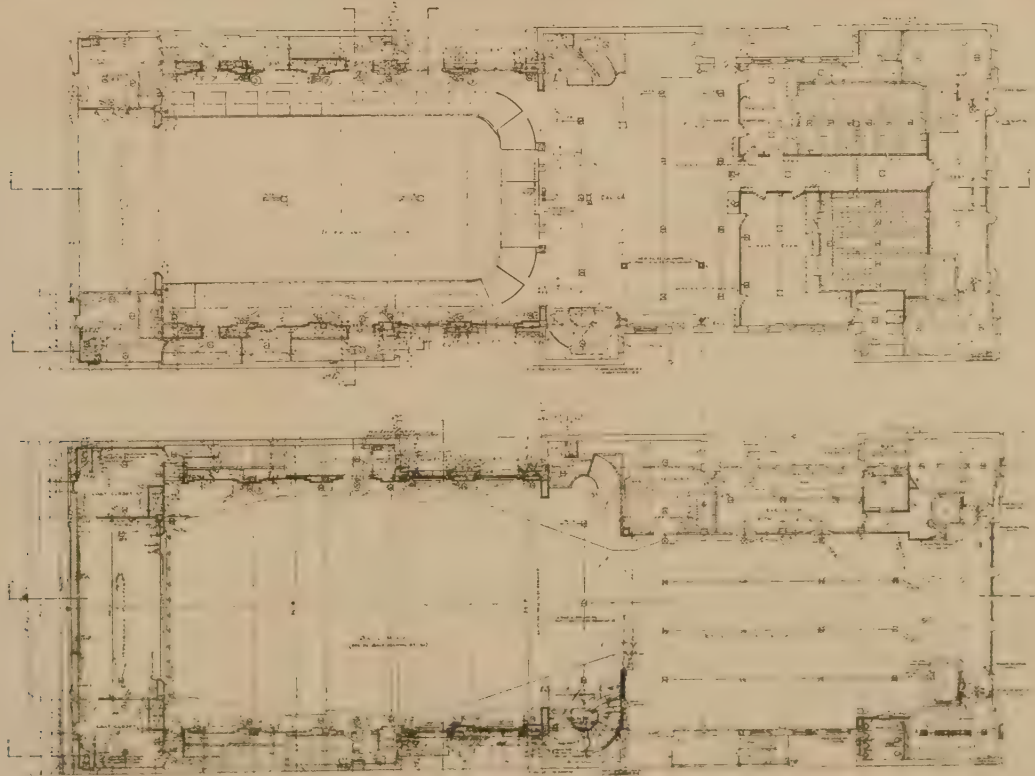
THE BALLROOM.

Trowbridge & Livingston, Architects.

MUSICAL MUTUAL PROTECTIVE UNION BUILDING, EAST 85TH AND EAST 86TH STREETS, NEW YORK.



CLUB-ROOM.



PLANS OF BALLROOM FLOORS.

Trowbridge & Livingston, Architects.

MUSICAL MUTUAL PROTECTIVE UNION BUILDING, EAST 85TH AND EAST 86TH STREETS, NEW YORK.

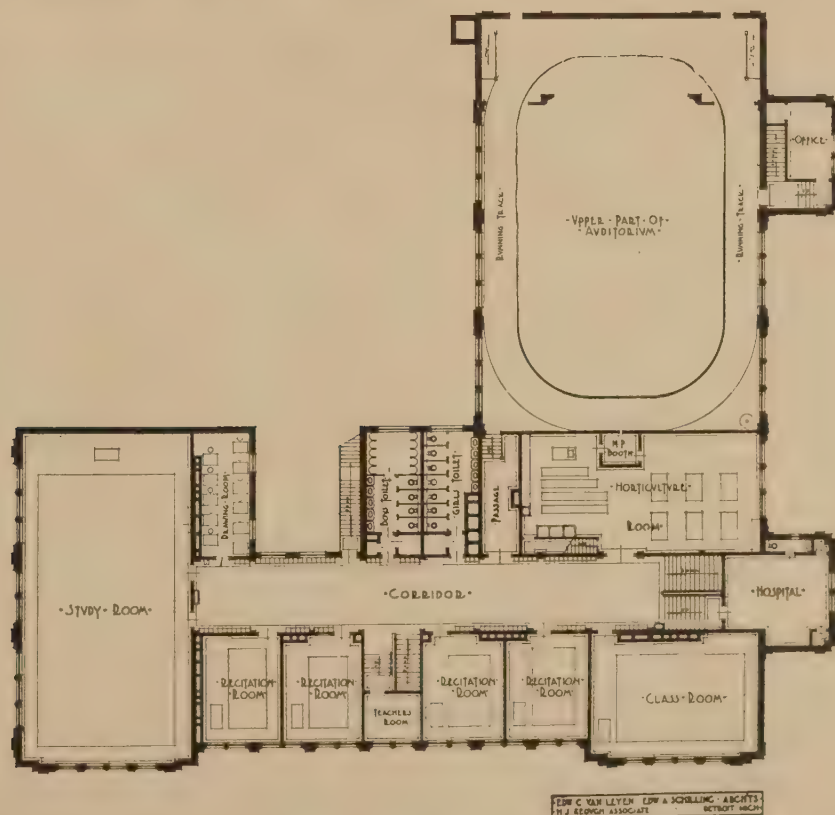


BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.

Van Leyen & Schilling, Architects; T. J. Krough, Associate.



GYMNASIUM.



• SECOND FLOOR PLAN •

Van Leyen & Schilling, Architects; H. J. Keough, Associate.

BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.



FIG. 1. FIRST FLOOR PLAN

BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.



FIG. 2. GROUND FLOOR PLAN

BALDWIN HIGH SCHOOL, BIRMINGHAM, MICH.

Van Leyen & Schilling, Architects, H. J. Keough, Associate.

The Building Situation of To-Day

By Richard P. Wallis

THE purpose of this article is to attempt to reconcile the prospective builder with the economic conditions that now confront him. In common with other industries there has always been the ever-present increment in cost. Before the war it was called the High Cost of Living, and people wondered what was the cause of it. The late war enormously enlarged this increment, but people understood what was the cause of it and accepted it, some, unfortunately, even to take advantage of it. One of the direct and most important heritages of the war is the comparative higher cost of commodities and labor than even during the period just preceding the World War. A good many people are looking forward to the ultimate readjustment of prices, now that peace is imminent, and a return to what might be called the pre-war basis. These people overlook the fact that a permanent change has taken place and that the basis for computing conditions in the future must be from the level now existent and not from any basis established at any time in the past.

The causes for this change of condition are more or less apparent and numerous. The fact that foreign governments have waged a large part of the war on finance borrowed from the United States, that for a good many years at least most of Europe must come to this market to make its purchases, as indeed they are now doing, means that there is an abnormally large amount of gold in circulation in this country. The necessary corollary of this condition is that the gold dollar, standard of value but not value itself, loses part of its purchasing power. This is an established economic theorem. There has been abnormal demand for many commodities and curtailed production in all but the essential production for the prosecution of the war. These conditions have resulted in a higher cost for the necessities of life as well as luxuries.

The building business entered the period of our participation in the war in a none too healthy condition. The fact that the war, beginning in 1914, had more or less upset the financial basis of the country, coupled with certain domestic uncertainties, created a condition that was not at all favorable to the successful continuance of the building trades. On the entry of this country into the war, April, 1917, the vast army of private builders was drafted for the construction of munition plants, cantonments, hospitals, housing schemes, and all that varied building necessary for the rapid welding together of an army organization. This left private building as a secondary consideration, and in fact it was not long before private building ventures were prohibited by government edict. All of these facts have combined to create a serious shortage both in residential quarters and in industrial construction.

A study of Chart No. 24, "Civilian Building in 120 Cities in the United States," indicates the almost straight decline beginning in 1916 and reaching in 1918 the low ratio of one-half of the years 1913-1914. Under normal conditions this curve would fluctuate above and below whatever value might be chosen as to represent 100 per cent, and thus the shortage of the years below the line would be taken care of by the surplus above the line. But starting from the present low point, and considering the hesitancy of those whose business it is to provide floor space and living ac-

commodations, the situation is bound to be bad for some time to come even if building operations are resumed in the immediate future. How much worse it will be if this period of stagnation and indecision continues, is easy but not pleasant to contemplate.

The present shortage of buildings of the residence class is felt more keenly than that of industrial buildings, as many of the plants erected for the production of munitions may serve other, peaceful purposes; but it is serious enough even in this class of building. The war has left America the opportunity of tremendously increasing its foreign trade. The Central Powers are eliminated from world trade for years to come and the rest of Europe is at the present engaged in binding up its wounds and making ready to begin to provide for its own bare necessities. The United States, on the other hand, has been left comparatively unscathed and is in an excellent position to take advantage of this unusual situation.

The far-seeing manufacturer has accepted the conditions, higher wages, and higher raw-commodity costs, and is prepared to meet these conditions by increasing his output, but at a smaller unit profit. In order to successfully consummate this end, he, the manufacturer, must increase the floor space of his factories and provide more suitable living accommodations for his employees. This means that before the manufacturer can attain this end, and before a surplus of manufactured commodities can be produced for export, he must have more buildings. Why, then, has not the building business prospered since the signing of the armistice? There are two principal reasons for this: The first is the uncertainty in the mind of the public as to the continuance of building-material prices at their present high figure, and the other is the misconceived idea of the exaggerated wage paid to labor. A comparison of Building Material Costs and Labor Wages may be obtained from Chart No. 25.

The first of these two reasons has been recognized, and considerable propaganda has been launched in hopes of stabilizing these prices for a fixed period of time so that a prospective builder may build now, free from the uncertainty that material prices may drop after he has made his expenditure, and thus give the advantage to the man who is more cautious and waits. If this condition of uncertainty were to prevail it would penalize the spirit of initiative and mortgage the industrial future of the country. A failure in the building programme leads to a series of well-nigh fatal consequences. Without factory floor space, production is limited, unemployment and all its attendant evils appear; without proper housing accommodations the moral fibre of the community suffers, and if this paralysis were to continue for any appreciable length of time, untold and unthought-of evils would arise.

The building-supply people recognize this possibility and are taking steps to remedy it. All parties interested in the rehabilitation of the building business should try to get together and attempt to fix the price of building material at the present rate for a definite length of time. This would instil confidence in the mind of the prospective builder and thus remove the first of the two principal impediments to the success of the building business.

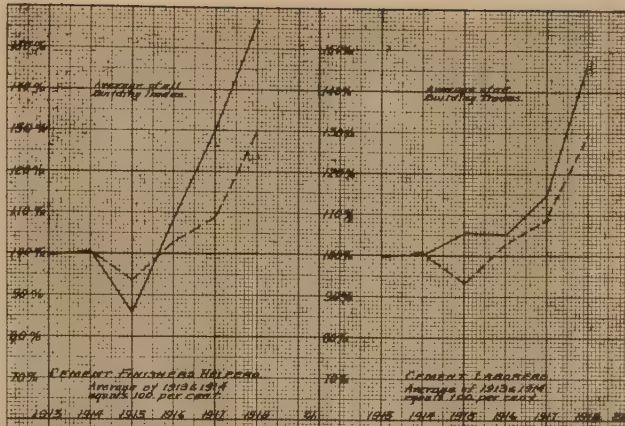


CHART II-Continued

These charts are constructed from information compiled by the Ordnance Salvage Board, War Department and are based upon the average annual Union Wage Scales, Building Trades, on the basis, 1913-1918 inclusive. All figures as of May 31st of each year in a minimum of 10 cities in all parts of the United States. The charts are constructed from data of 15 building trades in 1913 & 1914 as 100% and 1918 in the same years building charts prepared by the Price Section, Division of Monetary Statistics, War Industries Board. The dotted curve in each chart represents the average of all Building Trades and is included to assist in the comparison of each individual Trade with the average.

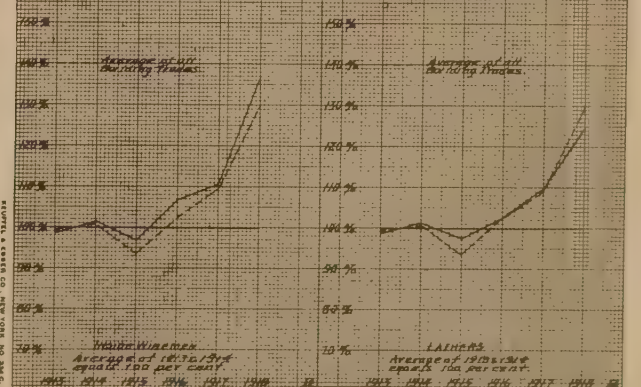
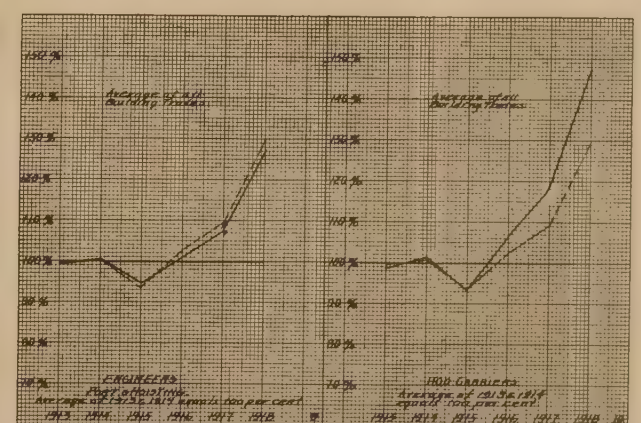
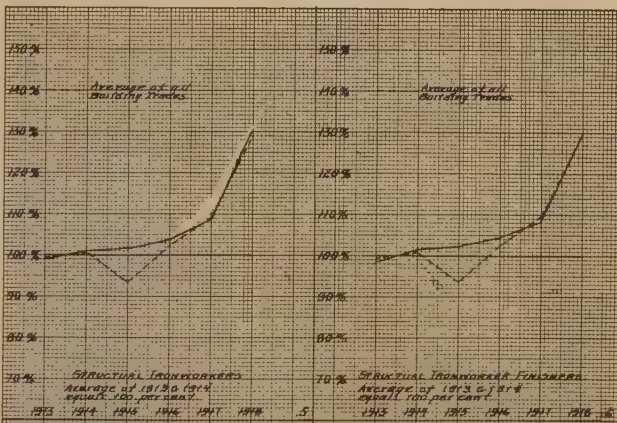
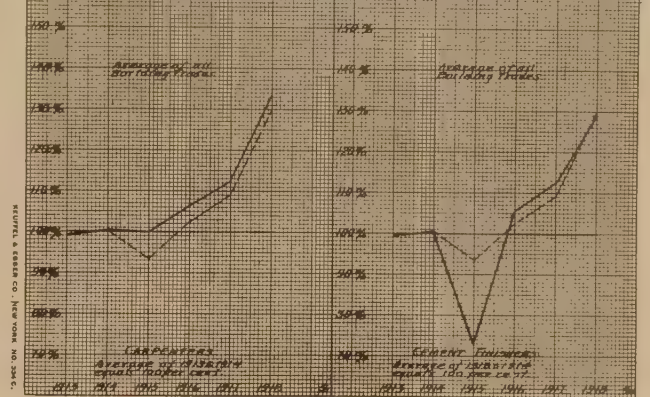
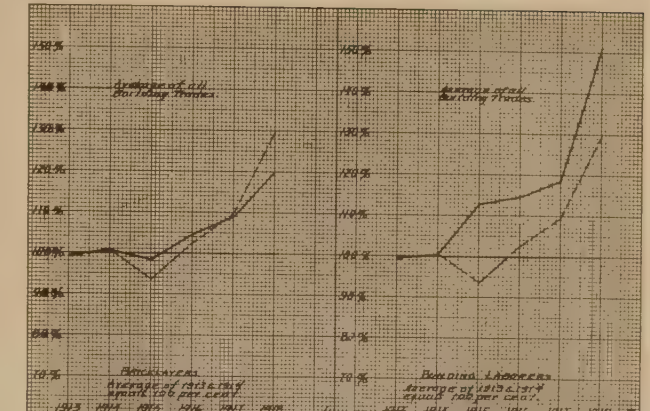


Chart No. 23 illustrates the comparison of building-material costs with those of other commodities, while subject to the same sharp rise in the period from 1916 on, it has remained lower in proportion than any of the other commodities platted. The curve representing building-trades wages is appended to show the disproportion between what labor is receiving and what it is paying for the necessities of life. This shows that labor is much worse off to-day, even with its higher wages, than it was during the period just preceding our entry into the war. Of course during the period of the emergency the income of labor was augmented by overtime and bonuses, but that has stopped, so we may now consider the relationship on the basis of straight wages and actual costs.

The second and the less-understood impediment is the popular conception of exorbitant wages paid to labor. There is no doubt that the rate of wages has sharply advanced in the last few years. But so have wages in other lines of endeavor. The question is, Is building labor disproportionately high? It is not. A study of the accompanying charts, numbers 1-22 inclusive, prepared from data obtained by the Salvage Board of the Ordnance Department, U. S. A., under the direction of Captain R. W. Yardley and Mr. L. F. Summerall, shows that the average of building labor as a whole is only 30 per cent higher than it was during the years 1913-1914. This should be an encouraging discovery. Wages in other industries have doubled and trebled in the last few years, but building labor has increased only one-third of itself. The question will be asked, Is this permanent? The answer is, Yes. No one should be asked to give his services for less than they are worth, and, comparing income and general living conditions, building labor is little, if any better off than in pre-war days. (See Chart No. 23.) If there is any prospect of wage readjustment in the immediate future it will be upward rather than downward. Organized labor

is a very powerful force and will never consent to go back to the old basis in the face of present conditions. Mr. Gompers himself has set this forth.

The building industry is huge, surpassed only in number of men employed in its various ramifications by the industry of agriculture. Twenty-five per cent of the total tonnage moved by the railroads is building material. Building directly affects all of us, either as a business proposition or as a domestic problem. If this present state of suspended animation continues we will all suffer because of it. The need to avert this condition and to insure over 4,000,000 people the opportunity to earn their livelihood, to insure the permanency of our newly acquired trade opportunities, and to insure every one of us the opportunity of a decent place to live in, is to educate the prospective builder. He must be shown that he is not at a disadvantage in building now, but that, on the contrary, he will probably never be able again to build for what he can build now. As soon as he realizes this fact and acts, the knot will be cut. We shall have new buildings, we shall insure the employment of the men now slowly returning from the other side, and every one of us will benefit from the confidence in the future that will be assured.

A good many of us are thinking of economic conditions that existed after the Civil War, and are trying to fit the present period to that in the attempt to predict an ultimate reduction of prices to a level somewhere near that which existed before. We lose sight of the fact that the Civil War, important as it was to us, was a local incident in the eyes of the world, whereas the present war has been a world-wide affair that has completely revised the financial basis of the world. It is obvious that a comparison between the two periods is unfair, and that we must accept the new state of affairs as permanent and proceed accordingly. Think it over.

Announcements

A new architectural firm, with offices at 30 East 42d Street, has been formed in New York, with the following members as partners: Edgar I. Williams, registered architect, B. Sc. and M. Sc. in architecture, Massachusetts Institute of Technology, winner of the Rome Scholarship and Fellow of the American Academy in Rome, Italy; Walter R. Mahnken, registered architect, a graduate in architecture of Pratt Institute and of the University of Pennsylvania (both having practised in offices of prominent architects in New York, Pittsburgh, and Boston, and executed their own work); and Alfred J. Mahnken, B. Sc. and C.E., Rutgers College, with ten years' experience as an architectural, civil, and structural engineer, and in general engineering and building construction. All have recently been in active service as commissioned officers with the United States Army.

We are advised by Elmer Grey that the Julian Eltinge house, published in our March number, should have been attributed to both Pierpont Davis and his brother, Walter S. Davis.

Frank J. Forster announces that he has resumed the practice of architecture. Offices: 1730-31 Aeolian Hall and 33 West 42d Street, New York.

Norman Hatton, Wm. J. Klein, and S. E. Holmes announce the formation of a partnership under the name of Hatton, Klein & Holmes. Their practice will be devoted to general engineering, architecture, machinery layouts, heating and ventilating and industrial engineering. Their offices are in the Masonic Temple, New York.

Book Reviews

Art Principles with Special Reference to Painting. By Ernest Govett. With a Photogravure Frontispiece and 30 Illustrations. G. P. Putnam's Sons.

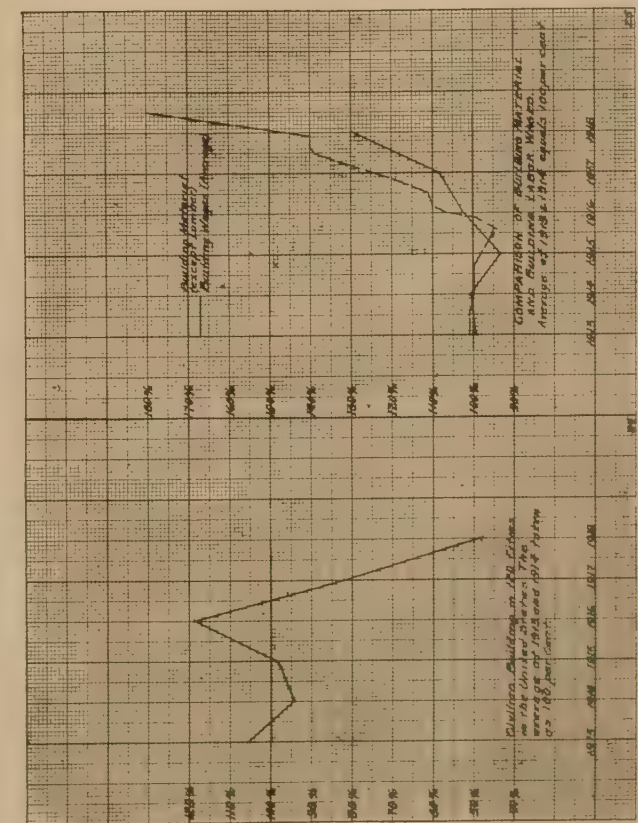
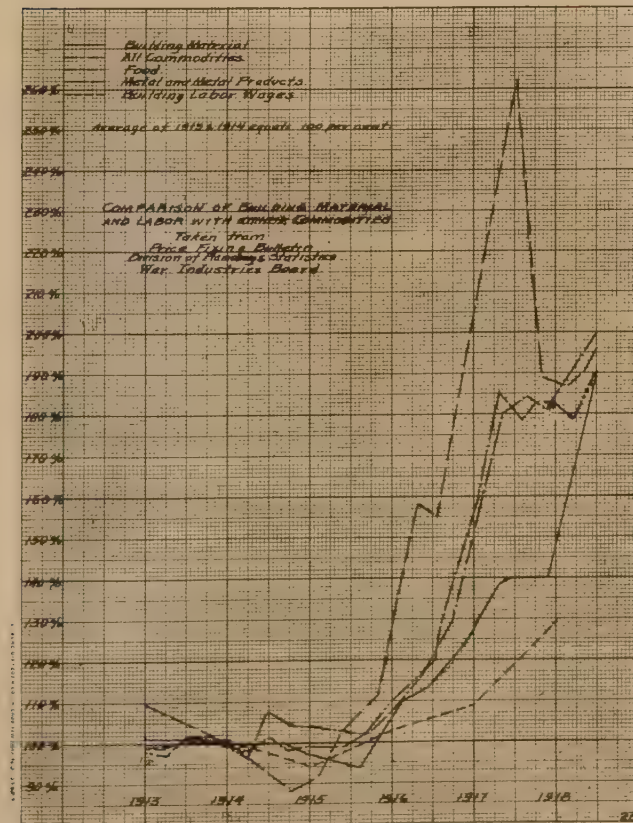
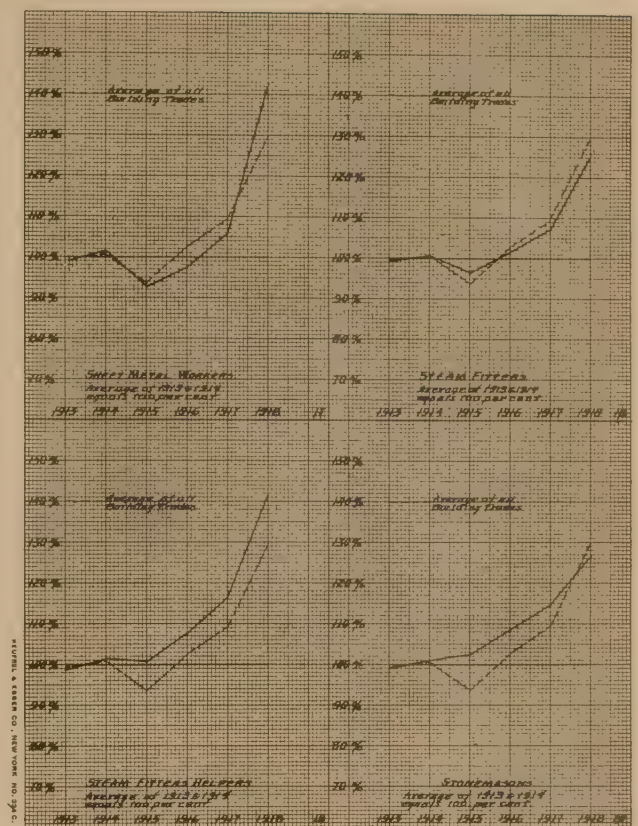
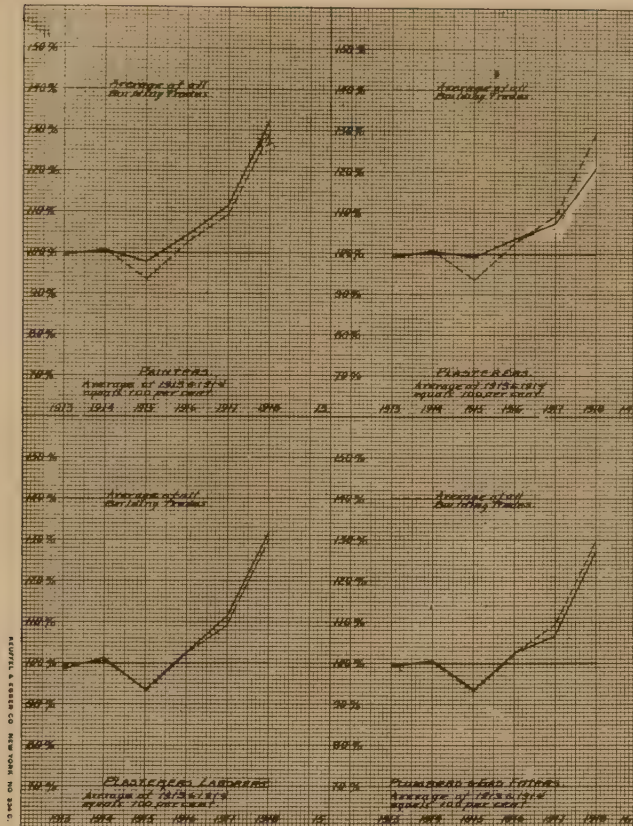
The definitions of art are as various as the forms in which it is made manifest and what is beautiful or the contrary has been since the beginning of art a question that must be settled largely by the individual point of view. The discussion is an unending, and always an interesting one, and when it is approached with a sincere purpose to show cause based on thoughtfully digested principles we may find profit and added appreciation of art in general. Mr. Govett has included in his discussion, under the head of Fine Arts, Poetry, Sculpture, Painting, as well as Poetry and Fiction. Of the architect he says:

"The architect is under the necessity of meeting the ends of utility, but subject to this restriction it is obvious that simplicity must be the keynote to his design, for the highest quality of beauty in his power to produce is grandeur, and this diminishes with an increase in the complexity of his sign combinations. The combination of simplicity with grandeur is the first form of beauty that would be recognized by the immature eye, and consequently in respect of the general test of art excellence, architecture falls into line with the Associated Arts, and not with music."

It is a pleasure to find a book about the arts so free from affectations. The style is admirably direct and the analyses of many famous pictures clear and comprehensive.

Ethics of Contracting and Stabilizing of Profits. By F. W. Lord. 16mo.

Here is a proposed League of Nations for the Building Trade, founded upon idealistic principles with a definite plan for carrying them out. It would do away with cut-throat methods of business. "It shows that it is for the best interests of all persons concerned in a building operation to co-operate and to treat each other openly and fairly, rather than to try to get ahead of one another by any of the thousand and one ways which are so common." We commend the reading of this little book to all concerned.



The Huguenot Memorial Church, Pelham Manor, N. Y.

Francis A. Nelson, Architect

THE Huguenot Memorial Church at Pelham Manor, N. Y., is essentially a suburban church. Designed with this end in view, the dominant idea is its simplicity in arrangement, construction, and appearance. Located as it is on a busy thoroughfare, the Boston Post Road, at the corner of Pelhamdale Avenue, it presents a pleasing picture of quiet simplicity and churchly charm to the many wayfarers who pass its doors. The building is L shaped in plan, one wing forming the church and the other the building for the Sunday-school and other activities. The belfry tower joins the two buildings and serves as an entrance to the church, Sunday-school, and the pastor's study on the ground floor, and contains the organ-loft above. At the back of the church is the vestibule, separated from it by a carved and glazed screen. Three entrances open off from this. Other ample entrances are provided for the Sunday-school, the assembly-room in the basement, the kitchen, and boiler-room service.

While the building follows in general character the lesser parish churches of England, it is unlike the large majority of these in that it has no clearstory or inside piers, an arrangement which enables every sitter to have an unobstructed view of the pulpit. This plan is much more acceptable in America than the English type.

The main walls of the church and tower are constructed of local stone, of varying colors, laid in white-mortar joints, decorative in effect. The trim is of cast stone approaching limestone in color. The roof is of variegated and graduated slate, with copper flashings, gutters, and leaders. The interior

is roughly plastered and has stone trim around the door and window openings. The roofs of church and Sunday-school are supported by exposed trusses which rely for their decorative effect on the structural members themselves. The actual rafters are exposed and the slate is laid directly on the dressed sheathing. This roof work is all of

yellow pine stained a deep warm brown, which contrasts agreeably with the gray stonework of the walls and window trim. Oak is used for trim in the church, whereas in the Sunday-school it is of yellow pine. Movable partitions in the Sunday-school provide separate

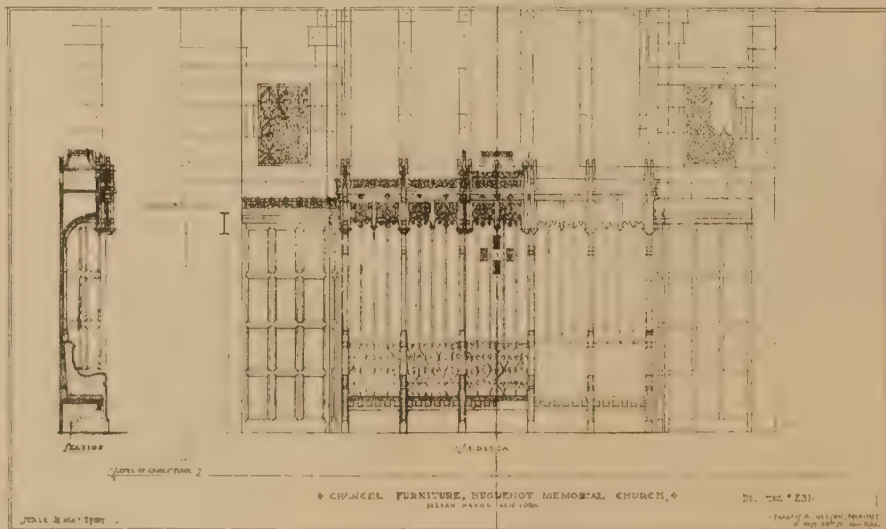
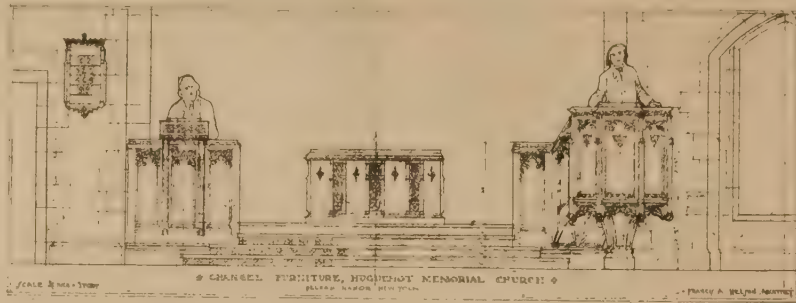
classrooms during the lesson hour. The wainscoted chancel of the church contains handsomely carved pulpit, lectern, sedilia and organ cases, a memorial gift.

Above the chancel is a beautiful fifteenth-century window designed and executed by Clement Heaton. Not only in point of architectural period, but also in the actual

manual processes, incident to the transfer of the design to the glass and in the firing, cutting, and leading of the many component parts, Mr. Heaton has obtained a result which harmonizes admirably with the English Gothic setting. Mr. Leon V. Solon has pronounced this work "the best and purest

piece of English Gothic in the country."

The building also contains primary and infant classrooms, women's room pleasantly situated, a pastor's study, men's Bible classroom, an assembly-room, and, adjoining it, a commodious kitchen with large serving pantry, so that church dinners and other social functions may be handled with great facility.

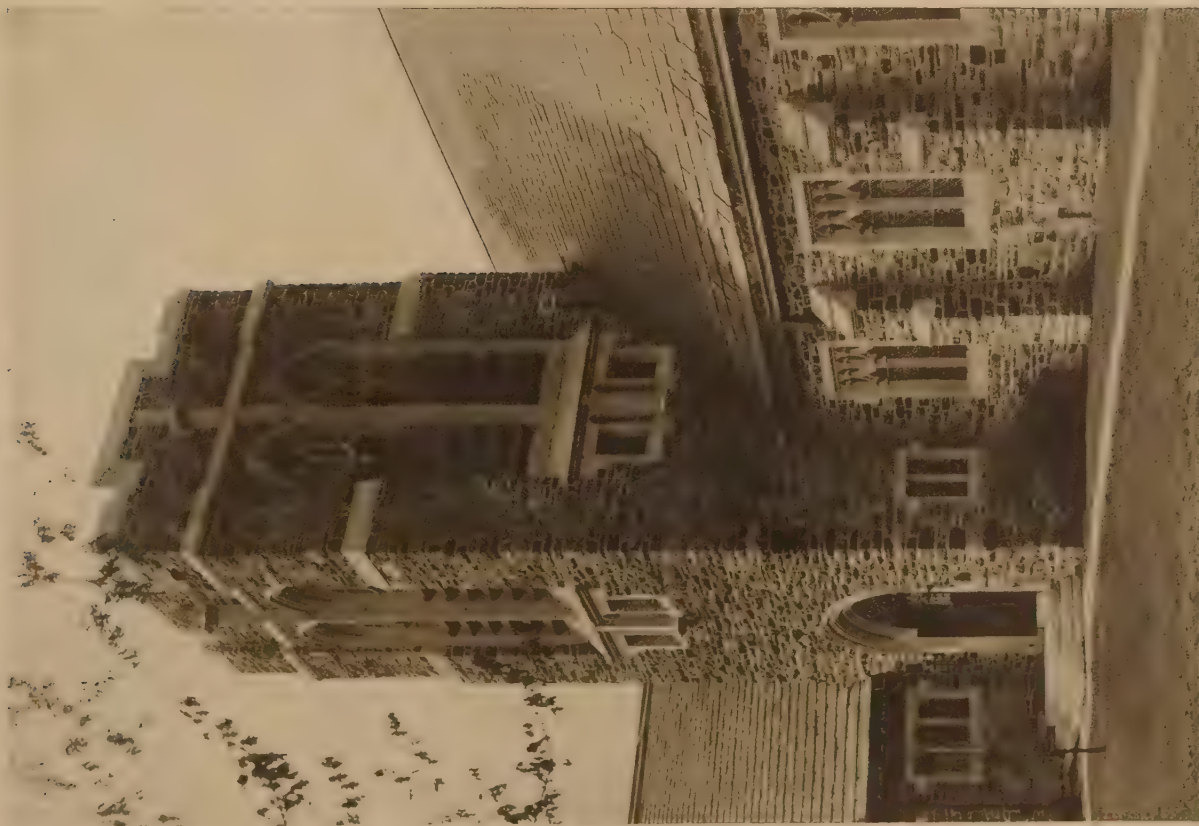




PULPIT.

Francis A. Nelson, Architect.

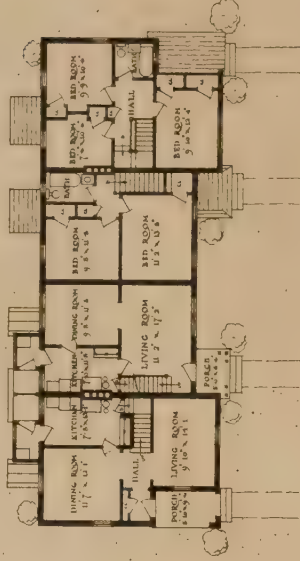
THE HUGUENOT MEMORIAL CHURCH, PELHAM MANOR, N. Y.



DETAIL OF TOWER.



FOUR-FAMILY HOUSE
Scale 0 10 20 30 Feet



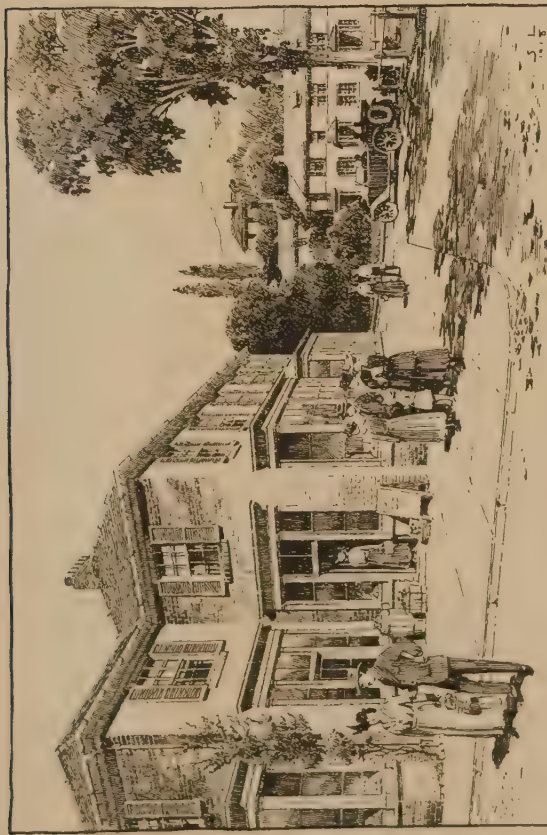
FIRST FLOOR PLAN

SECOND FLOOR PLAN

NEWBURGH NEW YORK
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
LUDLOW & PEABODY C.H. SPARRY RETAINED ARCHITECTS NEW YORK



NEWBURGH NEW YORK
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
LUDLOW & PEABODY C.H. SPARRY RETAINED ARCHITECTS NEW YORK



STORES AND APARTMENT HOUSE

Scale 0 5 10 15 20 25 Feet



FIRST FLOOR PLAN

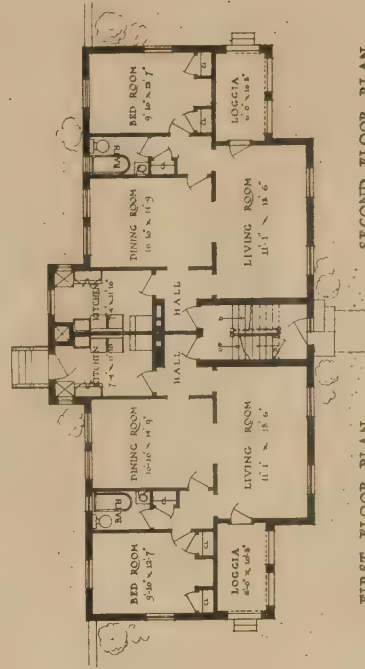
SECOND FLOOR PLAN

NEWBURGH NEW YORK
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
LUDLOW & PEABODY C.H.SPARRY RETAINED ARCHITECTS NEW YORK



APARTMENT GROUP

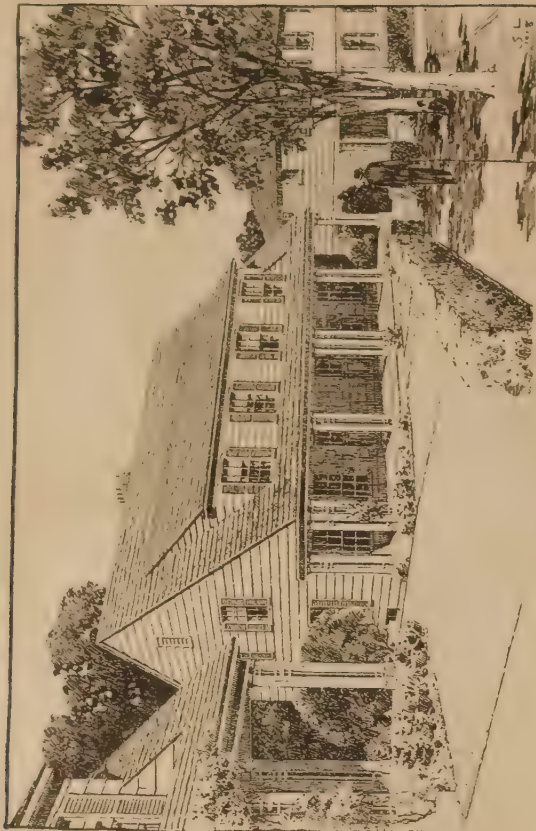
Scale 0 5 10 15 20 25 Feet



FIRST FLOOR PLAN

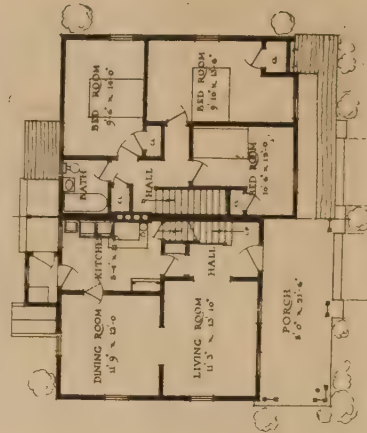
SECOND FLOOR PLAN

NEWBURGH NEW YORK
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
LUDLOW & PEABODY C.H.SPARRY RETAINED ARCHITECTS NEW YORK



SEMI-DETACHED HOUSE

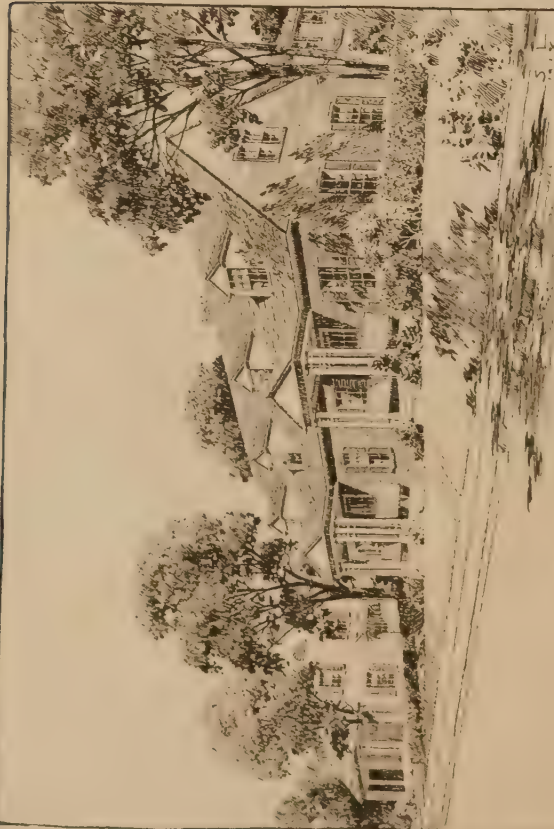
Scale 0 5 10 20 Feet



FIRST FLOOR PLAN

SECOND FLOOR PLAN

NEWBURGH NEW YORK
 UNITED STATES SHIPPING BOARD
 EMERGENCY FLEET CORPORATION
 LUDLOW & PEABODY C.H. SPARRY RETAINED ARCHITECTS NEW YORK



SEMI-DETACHED HOUSE

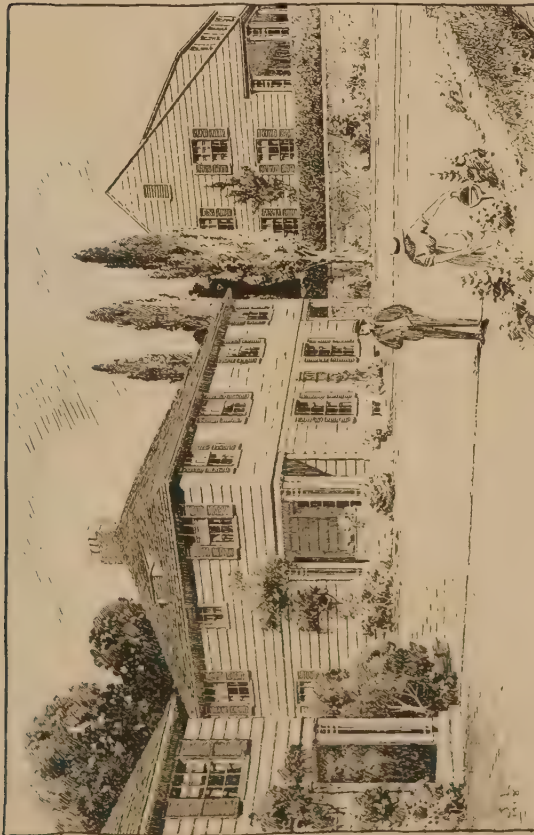
Scale 0 5 10 20 Feet



FIRST FLOOR PLAN

SECOND FLOOR PLAN

NEWBURGH NEW YORK
 UNITED STATES SHIPPING BOARD
 EMERGENCY FLEET CORPORATION
 LUDLOW & PEABODY C.H. SPARRY RETAINED ARCHITECTS NEW YORK



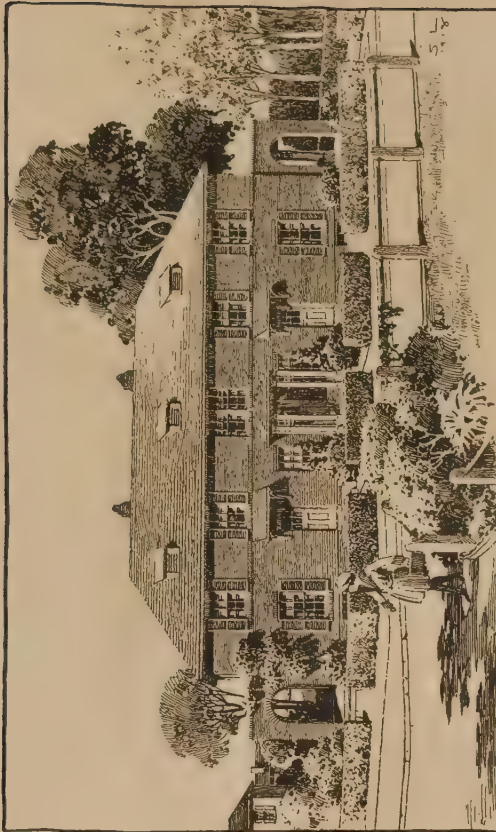
SEMI-DETACHED HOUSE
Scale 0 5 10 15 20 Feet



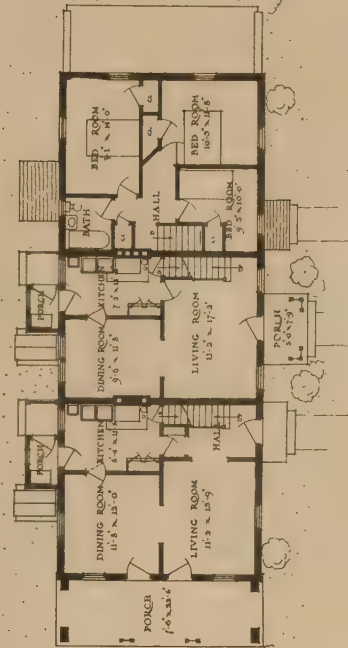
FIRST FLOOR PLAN

SECOND FLOOR PLAN

NEWBURGH NEW YORK
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
LUDLOW & PEABODY C.H. SPARRY RETAINED ARCHITECTS NEW YORK



THREE-FAMILY HOUSE
Scale 0 5 10 15 20 Feet



FIRST FLOOR PLAN

SECOND FLOOR PLAN

NEWBURGH NEW YORK
UNITED STATES SHIPPING BOARD
EMERGENCY FLEET CORPORATION
LUDLOW & PEABODY C.H. SPARRY RETAINED ARCHITECTS NEW YORK

Door-Knockers—Something About Their Origin and Development

THE origin of door-knockers is almost lost in obscurity, and their development from mere articles of utility to objects of art has been a long, slow process of evolution, covering centuries and antedating Western civilization by many hundreds of years.

The first general use of knockers that is positively known was among the ancient Greeks, who probably adopted them from the Egyptians. We are told that the Greeks considered it a breach of good manners to enter a house without warning the inmates, and that the Spartans gave this notice by shouting their arrival, while the Athenians announced themselves by using the knocker. Its introduction doubtless came at the time when doors superseded hangings, for the purpose of insuring greater safety or privacy.

In the Greek houses of the better class a porter was in constant attendance at the door to admit visitors. Slaves were usually employed in this capacity, and were chained to the door-posts to prevent their wandering and shirking the monotony of the task. They often went to sleep while on duty, and in order to awaken them a short bar of iron was fastened to the door by a chain to be used as a rapper by those desiring entrance to the house.

It is said that this strictly utilitarian rapper, as it was first called, was often wrenched from the door to be used as a weapon of offense by visitors who were not friendly disposed toward the householder. A later development was a direct consequence of this misuse, the next type being in the form of a heavy ring fastened by a strong clamp or plate to the door, thus serving the double purpose of knocker and handle.

From Greece the custom was transmitted to the Romans, and with the Western trend of early civilization to nearly every country of Europe. The introduction of knockers to England, where together with Italy and Germany they have attained the greatest artistic development, was no doubt due to the Roman conquest of western Europe and Britain.

Knockers have been in constant use, from the earliest times except for short periods in the seventeenth and nineteenth centuries, and were most freely used and elaborated during the Romanesque, Gothic, and Renaissance periods. The material first employed in their construction was iron, later bronze, and lastly brass, which has retained preference since it first came into use.

By slow degrees in the early Middle Ages the plain, heavy rings yielded to the influence of art in being bevelled and chased. The plate or support for the ring next began to assume various shapes, and in the age of blacksmithing developed very fine examples of craftsmanship before the handle emerged very far from the primitive ring formation.

Next the ring-shaped handle gave way to a slender bar terminating in a hammer.

Up to and during the fifteenth century the greatest embellishment was lavished upon the back plate and not on the knocker itself. Then the Renaissance swept Europe, and the Italian metal-workers first saw the sculptural possibilities in the treatment of the hammer. A female figure

or dolphin marked the beginnings, and Giovanni of Bologna was responsible in great part for development in the way of size and variety of treatment.

French, Italian, and German sculptors elaborated the designs, even to the extent of using four or five figures, until all simplicity and suggestion of utility disappeared and the knocker became merely a pendent statuette. In the eighteenth century there was a general reversion to simplicity, and utility again became the foremost consideration.

Knockers seem to have been favored in England more than in any other country, and may be found in great numbers even in the most remote and out-of-the-way places. The great variety of design and sculptural treatment is due to the fact that they had their inception at a time when design as a profession was unknown, and knockers were made by iron-workers under the supervision of master smiths, many of them being of odd design to fit doors of unusual shape.

The oldest knockers in England are the sanctuary knockers on the doors of several of the cathedrals, the one at Durham being one of the finest examples of the early bronze type. Some of these were merely grotesques, while others bore a symbolic significance. The Durham knocker dates from the eleventh century and enjoys a most interesting history. As early as the year 740, in the episcopate of Cynewulf, criminals and offenders of all kinds were allowed sanctuary at Durham cathedral and the church precincts. If in seeking to escape from his pursuers the criminal was able to reach the church-door and strike the knocker, he was given "sanctuary"; that is he was taken in, housed, fed, and kept safe from capture for thirty-seven days, after which he was either pardoned or taken to a place of safety far from the scene of his crime.

There was sanctuary also at the minories, at Whitefriars and at the old Mint in Southwark, the right being still retained for the precincts of Westminster Abbey long after the dissolution of the monasteries in 1540.

During the fifteenth and sixteenth centuries knockers were used on all classes of houses, and for the most part showed very intricate pattern and delicacy of design.

The instances of individual knockers are very numerous and their stories of great interest. One owned by Isaac Walton, author of "The Complete Angler," is described by a contemporaneous writer as a "lobworm of buxom proportions dangling from a hook," and was hammered out by an admiring smith whose shop stood between Walton's home and his favorite fishing-stream.

Knockers upon the houses of Doctor Johnson and Carlyle are of interest chiefly because of their association with men of letters in that period. At the time when extreme elaboration was in vogue, many artists of note designed knockers of more simple and dignified type for their own use, those by Dante Gabriel Rossetti and Sir Lawrence Alma-Tadema being among the finest examples.



Charles Dickens was considered an authority on this subject and made mention of knockers many times in the course of his writings. The one that he used upon his own door is particularly noteworthy because of its intimate description in the opening lines of the "Christmas Carol," in which old Scrooge, coming home late at night, imagines that he sees Marley's face gazing at him out of the darkness.



Shakespeare, too, mentions knockers frequently, and not many years ago a very rude and ponderous iron knocker was exhumed in Morayshire, Scotland, which it is claimed is the very one that wakened Macbeth in his castle.

Like instances are numberless in Great Britain, and many antiquarians as well as museums, such as the one at South Kensington, have made large and valuable collections of the massive knockers that were used in centuries past.

One of the chief factors in the subsequent reduction in size was the pre-Victorian pastime indulged in by nocturnal prowlers of stealing large and valuable brass knockers to sell for the few pennies they might bring as old metal.

Types of knockers finding the greatest favor in England in the seventeenth and eighteenth centuries were the Garland type, the Georgian urn, Diana's head, Hammer

types, some showing traces of Byzantine or Saracenic origin, and, greatly in demand, the Lion's Head, which retained its prominence in the American colonies until the revolution, when England was taboo and the Eagle took precedence over the Lion, and has remained a prominent form ever since, due to its national significance.

At this time many characteristic colonial knockers appeared, some of which may be traced to old English or other influence, while a great number were of origin in the colonies themselves and were more often than not very simple, dignified, and beautiful. New England towns especially abound in them, and they are well worthy of note.



For a short time in the century just past door-knockers, along with everything else that was old—no matter how beautiful—were relegated to the waste-heap, and everything new, however ugly, came into prominence. In recent years, however, they have come into their own again in greater force than ever before, and it is doubtful if ever again these charming and useful little objects with a history and art rooted in the antiquity of ages will be allowed to disappear from our doors.



The Administration Building of the Fisk Rubber Company

This building houses a variety of activities that would hardly be equalled in the most cosmopolitan of a great city's greatest skyscraper.

It had to be constructed to fit, not merely to hold, a printing department more perfectly equipped than many an independent printing plant; the purchasing department, which had to be so located as to be of easy access to a constant stream of callers; an engineering department; a traffic department, where everything from train-load freight shipments to the securing of Pullman tickets is handled; a credit department; a department of service; sales and advertising departments, which have been so largely responsible for the success of this company; the Fisk Social and Athletic Association; an export department, and so on through specially designed offices for officials and a score of other activities concerning which there is not space to mention.

Annual Meeting of the Joseph Dixon Crucible Company, 1919

The stockholders of the Joseph Dixon Crucible Company held their annual and regular meeting in April. The following directors and officers were elected:

Directors—George T. Smith, William G. Bumsted, J. H. Schermerhorn, George E. Long, Edward L. Young, Harry Dailey, Robt. E. Jennings.

Officers—George T. Smith, President; George E. Long, Vice-President; J. H. Schermerhorn, Vice-President; Harry Dailey, Secretary; William Koester, Treasurer; Albert Norris, Assistant-Secretary and Assistant-Treasurer.

The American Graphite Company, incorporated under the laws of the State of New York, is a subsidiary of the Joseph Dixon Crucible Company, and its annual election was held on the same day as that of the Joseph Dixon Crucible Company, and resulted in the election of the following officers: George T. Smith, President; George E. Long, Vice-President; J. H. Schermerhorn, Treasurer; Harry Dailey, Secretary; William Koester, Assistant-Secretary and Assistant-Treasurer.

"Physical Properties of Dense Concrete as Determined by the Relative Quantity of Cement," by Professors Giesecke and Finch

This bulletin shows how the compressive, tensile, and transverse strengths and other physical properties of dense concrete vary with the per cent of cement used in the preparation of the concrete, and thereby enables the designer and the builder of concrete structures to effect the greatest possible economy in the use of concrete by requiring the fine and coarse aggregate for the concrete to be mixed in such proportions as will secure a dense mixture, and adding only such a per cent of cement as is necessary to produce the strength or other physical properties desired in the concrete.

The bulletin is for free distribution on application to Publications Committee, University of Texas, Austin, Texas.

Personal

C. E. Schermerhorn, architect, member American Institute of Architects, 430 Walnut Street, Philadelphia, Pa., announces resumption of practice, having completed his services with Military Intelligence Section, Plant Protection Division, General Staff Corps, United States Army.



U. S. POST-OFFICE AND COURT-HOUSE, AUSTIN, TEXAS.

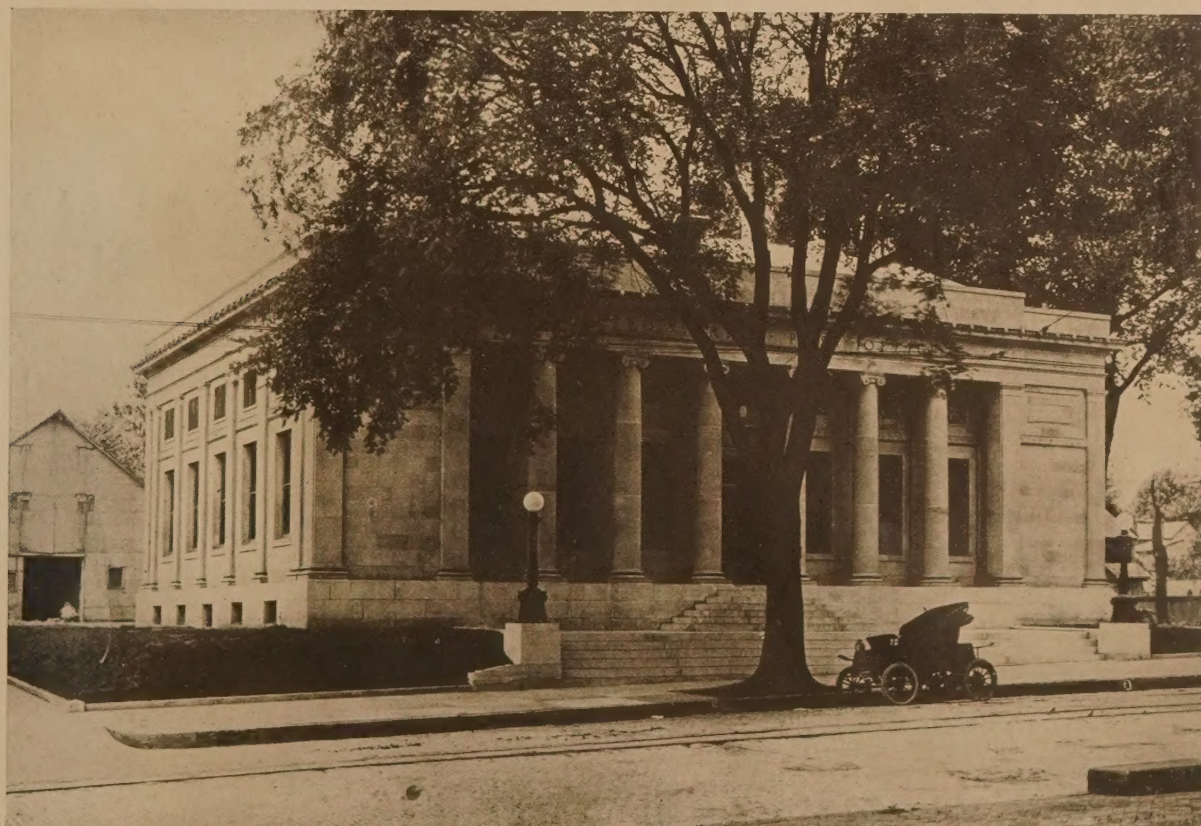


U. S. POST-OFFICE AND COURT-HOUSE, AUGUSTA, GA.

James A. Wetmore, Supervising Architect, Treasury Department.



U. S. POST-OFFICE, WESTERLY, R. I.



U. S. POST-OFFICE, WOOSTER, OHIO.

James A. Wetmore, Supervising Architect, Treasury Department.



U. S. POST-OFFICE, BEMIDJI, MINN.



U. S. POST-OFFICE, CHERRYVALE, KAN.

James A. Wetmore, Supervising Architect, Treasury Department.

